

**BULLER PLATEAUX CONTINUATION PROJECT,
WESTPORT, SOUTH ISLAND:
ARCHAEOLOGICAL AND HISTORIC HERITAGE
ASSESSMENT
(PART 2 – UPPER WAIMANGAROA HAUL ROAD AND
DENNISTON PEST EXCLUSION FENCES)**

Prepared for Bathurst Resource Ltd

April 2026



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TABLE OF CONTENTS

Introduction	1
Project Background	1
Methodology	3
Upper Waimangaroa Haul Road (UWHR)	4
Proposed Project Summary	4
Historical Background	9
UWHR - Southwestern Section	10
Archaeological Background and Effects on Heritage Sites	10
Effects of the UWHR – Southwestern Section	13
UWHR – Eastern Section.....	16
Archaeological Background and Effects on Heritage Sites	16
Iron Bridge Mine (L29/98).....	16
Effects of the UWHR – Eastern Section	26
Power Poles.....	27
Effects of the UWHR Proposal – East Section	27
Kiwi Mine Fan House and Compressor (L29/101 Kiwi Mine)	28
Beggs Outcrop (L29/99)	31
Archaeological Background.....	31
Effects of the UWHR Proposal– Eastern Section	35
Cooks Lease Area (L29/102)	35
Archaeological Background.....	35
Effects of the UWHR Proposal– Eastern Section	35
UWHR Discussion and Conclusions	37
Summary of Results	37
Archaeological/Historic Heritage Value and Significance	38
Assessment of Historic Heritage Effects and Mitigation	46
UWHR Recommendations.....	54
Denniston Pest Free Enclosures	55
North Denniston	56
Effects of the North Denniston fence.....	58
Denniston Coalbrookdale.....	61
Effects of the Denniston Coalbrookdale fence.....	62
Conclusions	66
Denniston Pest Free Enclosure Fences Recommendations.....	67

Bibliography.....	68
NZAA ArchSite Site Record Forms	69

INTRODUCTION

Project Background

Bathurst Resources Ltd (including subsidiary companies, Bathurst Coal Ltd, and Buller Coal Ltd) and joint venture partner BT Mining Ltd (collectively referred to as Bathurst) is seeking authorisation through the Fast-track Approvals Act 2024 (FTAA) to progress the development and mining of coal resources across the wider Buller Plateaux, known as the Buller Plateaux Continuation Project (the Project or BPCP).

The Project covers areas across both the Denniston Plateau and Stockton Plateau, collectively referred to as the Buller Plateaux, located approximately 15km northeast of Westport on the West Coast of the South Island. The Project covers five Project sub-areas: Stockton (including the Ngākawau Coal Handling Facility and Aerial Ropeway); Mount Frederick South; Escarpment Extended; the Upper Waimangaroa Haul Road; and Cypress (**Error! Reference source not found.**).¹

Due to the large amount of information discussed, the BPCP Archaeological and Historic Heritage Assessment has been divided into six parts, which covers each of the Project sub-areas, the Discussion and Conclusions of the BPCP Project and an Appendix report:

Part 1. Escarpment Extended (ESE) Project sub-area;

Part 2. Upper Waimangaroa Haul Road (UWHR) Project sub-area and Denniston pest free enclosure fences;

Part 3. Mount Frederick South (MFS) Project sub-area;

Part 4. Stockton Project sub-area and Stockton pest free enclosure fences;

Part 5. BPCP Project Discussion and Conclusions;

Appendix: Historical and Archaeological Background of the Denniston and Stockton Plateaux.

This report is Part 2. BPCP Upper Waimangaroa Haul Road (UWHR) Archaeological and Historic Heritage Assessment, commissioned by Bathurst and prepared as part of the required assessment of effects accompanying an application under the FTAA, which includes consideration of the heritage provisions of the District Plan (Resource Management Act (RMA)) and the requirement for Authority to modify various archaeological sites under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA). Recommendations are made in accordance with statutory requirements.

This is an assessment of effects on archaeological and historic heritage values and does not include an assessment of effects on Māori cultural values. It is noted that an assessment of effects on Māori values should only be made by the tangata whenua and this will be provided by tangata whenua as a separate Cultural Values and Impact Assessment. Māori

¹ Note only continuation of the existing Cypress Mine authorised under existing consents; however Wildlife Act Authorities are required to be renewed, as well as variations to existing conditions to ensure integration with the BPCP.

cultural concerns may encompass a wider range of values than those associated with archaeological sites.

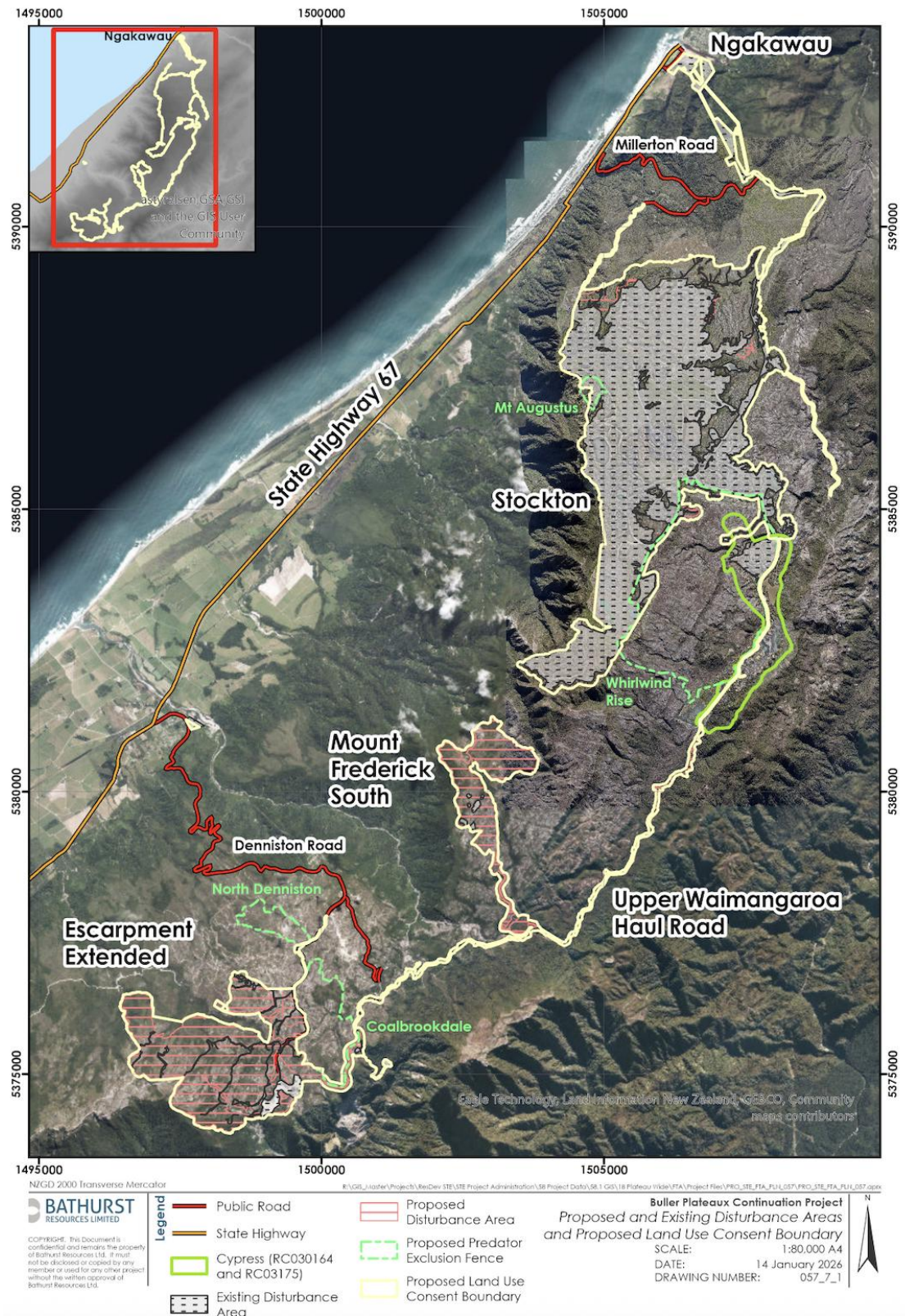


Figure 1. BPCP Project area and the proposed disturbance and consent areas, including the Upper Waimangaroa Haul Road and Pest Free Enclosures (source: Bathurst)

Methodology

There has been a great deal of previous historical research, archaeological survey and assessments carried out on the Denniston and Stockton Plateaux, which is summarised in the accompanying Appendix report: BPCP Historical and Archaeological Background. This references the literature and the numerous archaeological reports relevant to the area that were consulted (see Bibliography) and are a main source of information on the historic heritage and archaeological sites on the Denniston Plateau and within the BPCP Area for this report.

The New Zealand Archaeological Association's (NZAA) site record database (ArchSite), Buller District Plan schedules and the Heritage New Zealand Pouhere Taonga (Heritage NZ) New Zealand Heritage List/Rārangī Kōrero were searched for information on sites recorded in the vicinity.

Visual inspections of the Project sub-areas were conducted by the authors in March 2020, November 2024 and April 2025.

UPPER WAIMANGAROA HAUL ROAD (UWHR)

The Upper Waimangaroa Haul Road (UWHR) will link the Denniston and Stockton Plateaux so that coal extracted from the ESE Project sub-area can be processed, washed, sized and blended with coal from the MFS Project sub-area, Cypress and Stockton coal prior to transport to the Ngakawau rail-loadout for export. The UWHR will provide access for large trucks to transport coal to the Stockton Coal Handling and Processing Plant (CHPP) and for service and other vehicles to move between the various Project sub-areas and eliminating the need for heavy machinery and trucks to utilize the public road network. The majority of the UWHR footprint is Crown owned land, predominantly administered by LINZ, with the remainder administered by DOC (**Error! Reference source not found.**).

Various options were considered to link the Denniston and Stockton Plateaux. The UWHR has been selected as the preferred coal haulage option, based on an extended assessment, considering multiple criteria such as footprint and effects (including heritage), technical risk, closure requirements, permitting, capital and operating costs.

Proposed Project Summary

For a detailed description of the UWHR project sub-area, please refer to the project description within the Assessment of Environmental Effects provided with the application. The proposed consent and disturbance areas for the UWHR Project sub-area is shown in Figure 2.

Construction of the UWHR is scheduled to commence immediately upon Project approval. The haul road alignment is 15 km in length and where possible the selected alignment utilises existing access roads and previously cleared areas to minimise the disturbance footprint. Where the route follows existing 4WD tracks, these will require widening and straightening. Approximately 4 km of the haul road alignment traverses previously undisturbed ground, comprising 1 km adjacent to the ESE Infrastructure and 3 km connecting the haul road to Cypress mining operations in the north (see Figure 3 and Figure 4).

The haul road running surface will be 8.6 m wide for dual lane haulage operations with an allowance for surface drainage and earthen side barriers (vehicle arrest/barrier) (Figure 5). Where public access currently exists through to the Mackley Track, separated pedestrian/cycle access will be provided for. The defined footprint has allowances for sediment control sumps, laydown and staging areas aligned with existing disturbance footprints.



The total consenting footprint of the UWHR Project sub-area is 88 hectares (ha), with 15 ha of existing disturbance (includes up to 31 March 2027) and a planned 37 ha of disturbance. A further 37 ha is included within the consent area as a buffer area where Bathurst does not intend to disturb, however consent is being sought to do so for contingencies or where further detailed designs are yet to be completed.

For this discussion the proposed UWHR and archaeological and historic heritage sites are described in two parts – firstly, the southwestern section from the UWHR sub-area from the ESE Project sub-area to the western end of Cedar Creek Road (referred to as the ‘southwestern section’), and secondly, the eastern section of the UWHR sub-area from the western end of Cedar Creek Road to the Cypress Mine (Figure 2) (referred to as the ‘eastern section’).

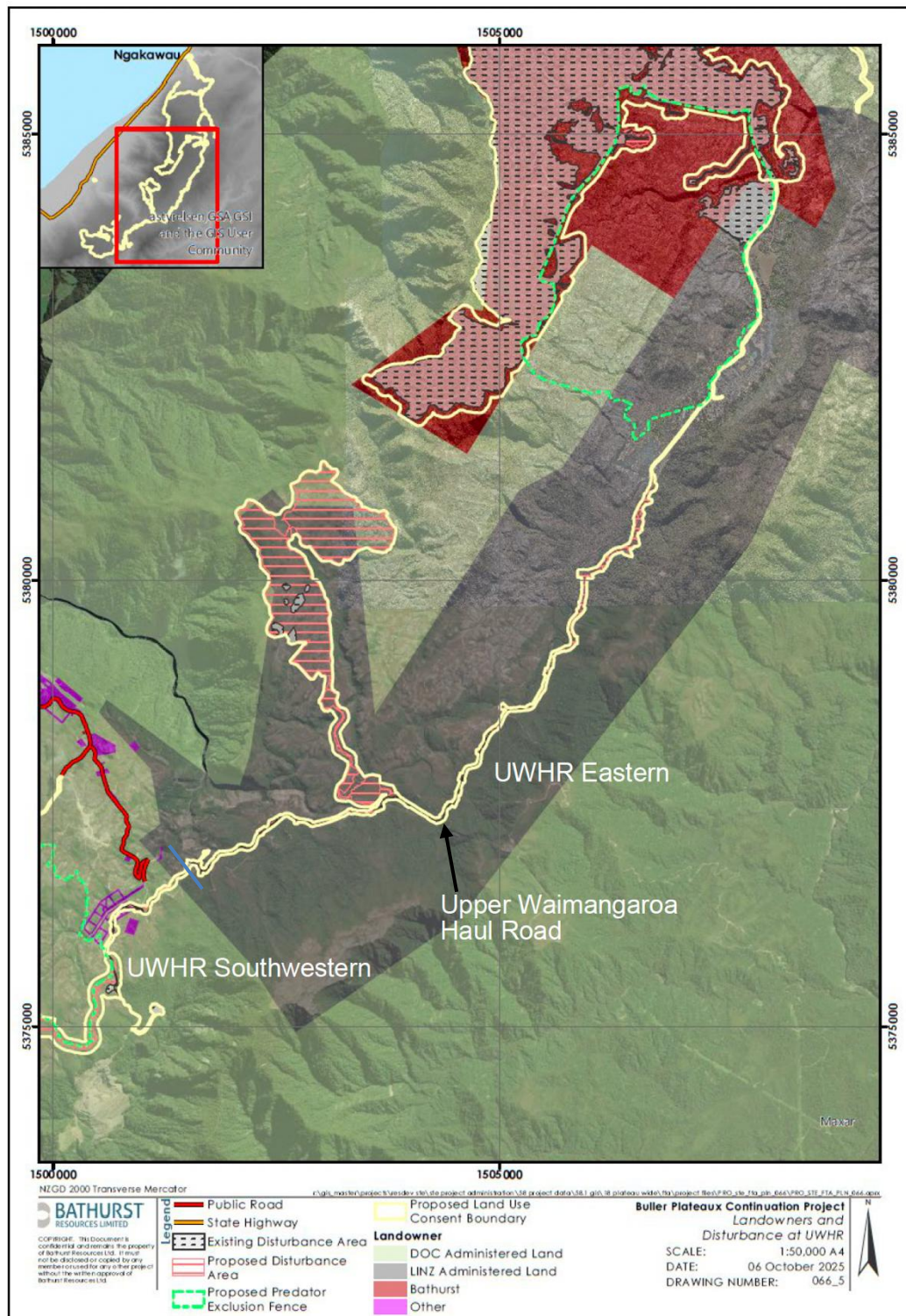


Figure 2. UWHR Land ownership of the proposed disturbance. UWHR Southwestern section and UWHR Eastern section discussed below are separated by the blue line (source: Bathurst)

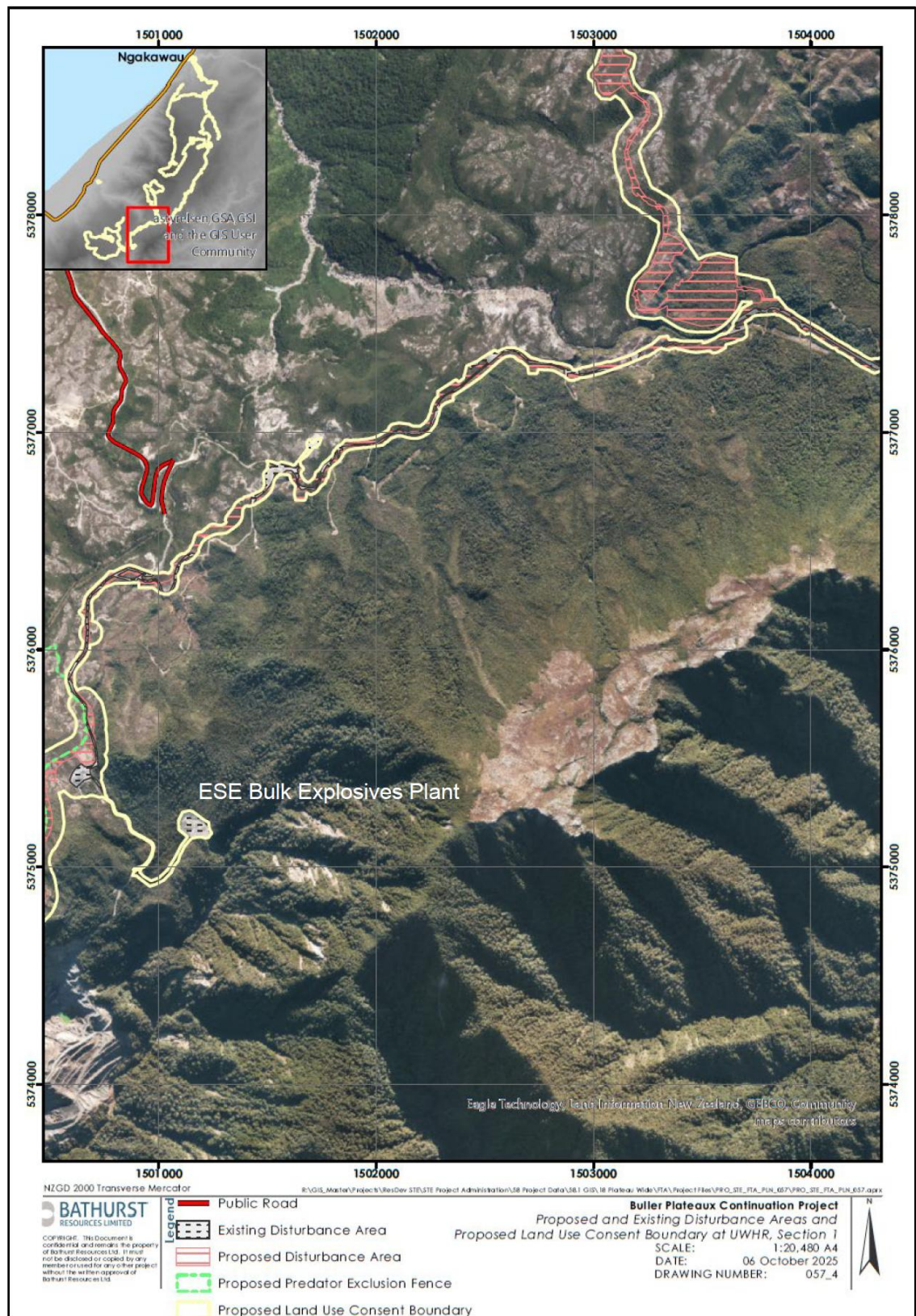


Figure 4. Proposed disturbance and consent areas for the UWHR (Section 2 – Northern End)
(source: Bathurst)

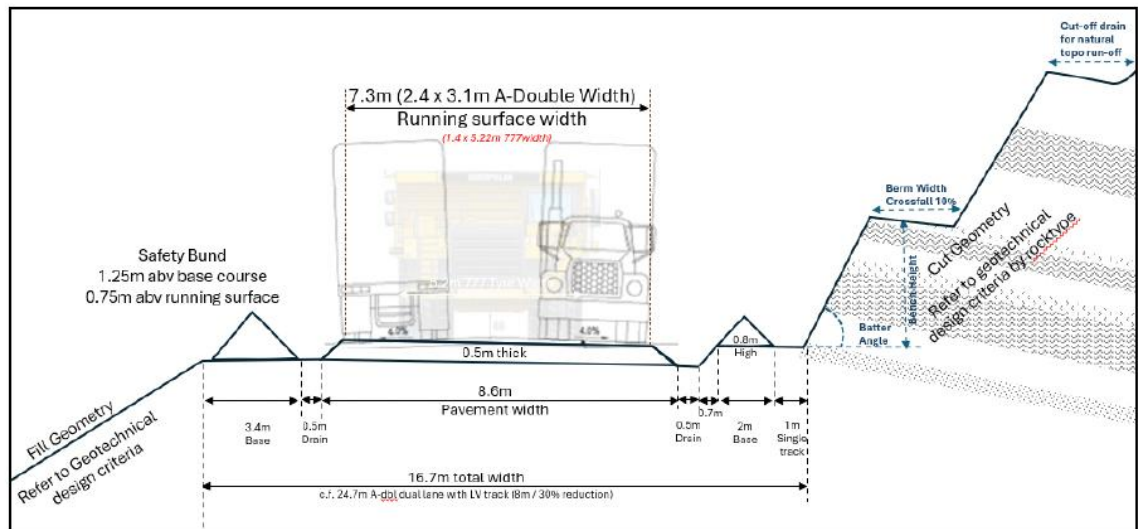


Figure 5. Cross section of the proposed UWHR (source: Bathurst)

HISTORICAL BACKGROUND

The history of European coal mining on the Denniston Plateau is extensive and has been outlined in detail elsewhere.² Coal mining on the plateau began in the 1870s and has continued until the modern day, gradually spreading out across the plateau.

There has been a great deal of previous historical research, archaeological survey and assessments carried out on the Denniston and Stockton Plateaux, which is summarised in the accompanying Appendix report: BPCP Historical and Archaeological Background. This references the literature and the numerous archaeological reports relevant to the area that were consulted (see Bibliography) and are a main source of information on the historic heritage and archaeological sites on the Denniston Plateau and within the BPCP area for this report.

The Appendix report should be read in conjunction with this assessment report.

² Particularly HNZPT NZ Heritage List # 7049 <https://www.heritage.org.nz/the-list/details/7049>; Wright 2001; Watson and Wright May 2004; Petchey 2007. Also see Bibliography.

UWHR - SOUTHWESTERN SECTION

Archaeological Background³ and Effects on Heritage Sites

There have been several previous archaeological studies in the vicinity of the UWHR – Southwestern Section. The area was first surveyed as part of the ‘Coalfields Park Report’ (Sumner and Sumner 1983) and by Les Wright for the Denniston Heritage Concept Plan (2001). In 1992, Ray Hooker carried out a survey of the Coalbrookdale area as a result of proposals to construct a walkway at Burnett’s Face (Hooker 1992). The survey covered the lower kilometre of the Coalbrookdale Valley and resulted in a number of sites being entered onto the New Zealand Archaeological Association (NZAA) site record file. In 2007 detailed recording of coal mining and settlement sites in the Denniston Historic Area was undertaken for DOC, including the Coalbrookdale area (Petchey 2007)

Field survey of the proposed UWHR – southwestern section was carried out by the first two authors in November 2024. Bathurst provided LiDAR and georeferenced plans of the known extent of historic underground workings into the Avenza Maps app and the use of GPS, which were used to focus survey.

From the ESE Project sub-area, the southwestern section of the UWHR will be greenfields construction for approximately 1 km to link in with the existing Cascade Mine access road. This alignment has been selected through an extended options assessment to avoid the archaeological sites and other heritage features located within the Heritage NZ Listed Area – Denniston Historic Area, a Category I historic place (NZ Heritage List No. 7049) and Te Tai o Poutini Plan (TTPP) Heritage Schedule One: Historic Heritage Items and Areas and Archaeological Sites – Denniston Historic Area (HH5).⁴

A number of archaeological and other historic heritage sites are recorded within the Denniston Historic Area in the lower reaches of the Coalbrookdale Valley, which are associated with the Coalbrookdale Mine (1884 -) and ‘Village of Coalbrookdale’ (1891-1956) (see Figure 6 and Table 1). The UWHR will cross within the very southern end of the Historic Area; however, there are no archaeological sites or other historic heritage features located within this area.

The closest recorded heritage features within the southern extent of the Denniston Historic Area to the UWHR – southwestern section are the Coalbrookdale Fan House (L29/86), the Fan House Dam (Feature 76) and Whareatea Dam (L29/49 – Feature 78) (Figure 7), which will all be avoided.

Between the Cascade Mine access road and the Cedar Creek Road, the UWHR will be formed primarily along existing four-wheel drive access tracks with some greenfields construction. One section of the UWHR within the existing Cascade Mine access road runs along the ridge above Coalbrookdale Valley on its eastern edge and within the 50m buffer of the Denniston Historic Area and in proximity to a number of recorded archaeological sites – L29/24 the rope road formation, L29/25–28 and L29/30–36, which are numerous house sites associated with the Coalbrookdale Village, and L29/29, the

³ Refer to the accompanying Appendix report for greater detail on the archaeological background of the wider Project area and the Coalbrookdale Mine and Village of Coalbrookdale.

⁴ For detail on the Heritage NZ Listed Area – Denniston Historic Area, see the accompanying Appendix report: BPCP: Historical and Archaeological Background.

Coalbrookdale Hotel site (Figure 6). However, the rope road formation (L29/24) between Burnett's Face and the Coalbrookdale Sheets (Feature 65) runs along the bottom of the valley floor and the house sites and hotel are located close to the rope road, well clear of the proposed alignment of the UWHR, which will be located within a widened footprint of the Cascade Mine access road.

It should be noted that the inaccuracy of the NZAA Archsite grid references for some of these sites places them outside the Heritage NZ Listed Area in Figure 6, but Figure 8 shows the accurate location of these sites in relation to the floor of the Coalbrookdale Valley and rope road formation.



Effects of the UWHR – Southwestern Section

The southwestern section of the proposed UWHR does cross the very southern extent of the Heritage NZ Listed Area and TTPP Scheduled One Historic Area – Denniston Historic Area. However, within the Denniston Historic Area it will not impact on any known archaeological and other historic heritage sites or features, including those sites located in the lower reaches of the Coalbrookdale Valley, which are associated with the Coalbrookdale Mine and ‘Village of Coalbrookdale.’

While avoiding known archaeological features, due to the required earthworks for greenfields construction of this section of the UWHR and the close proximity of the late 19th century mining remains within the Denniston Historic Area there is the potential to impact on previously unrecorded subsurface archaeological remains.

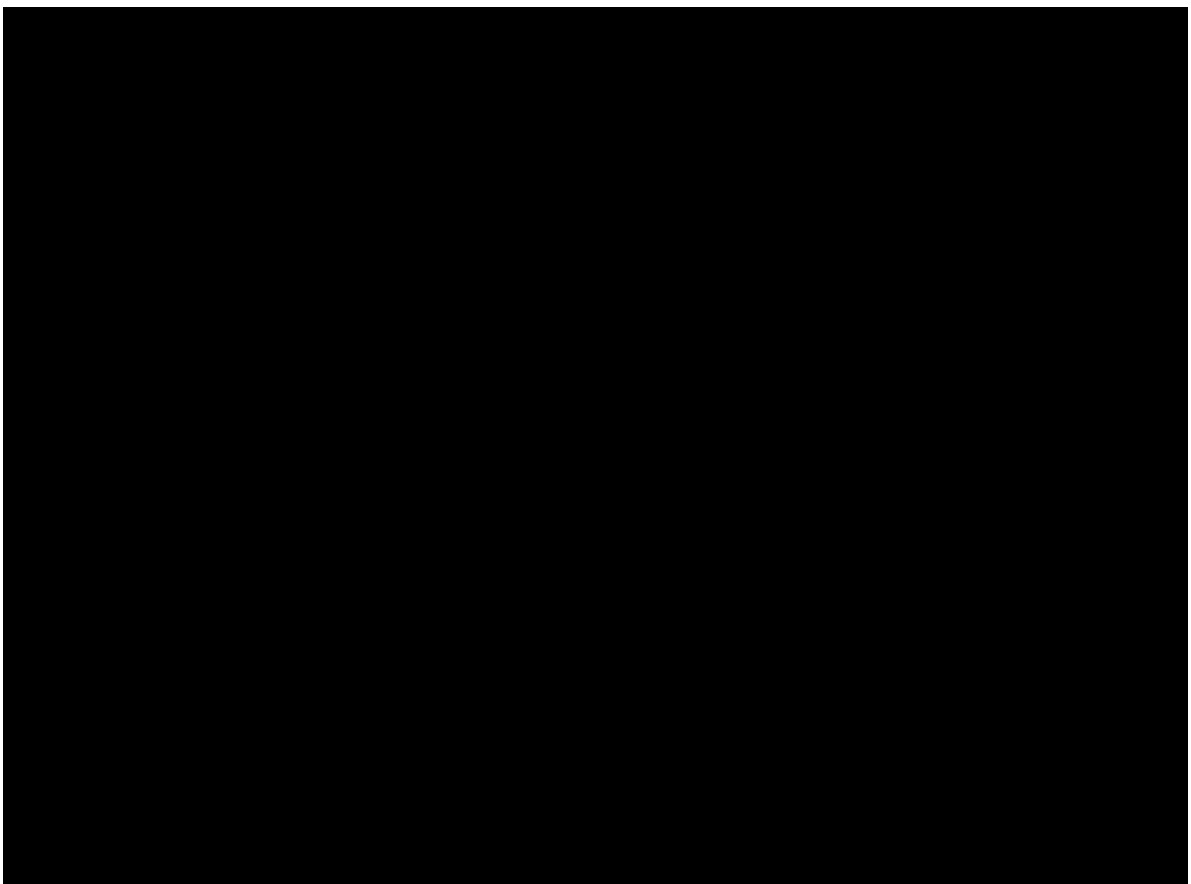


Figure 7. The location of the Coalbrookdale Fan House (L29/86 – blue circle)), the Fan House Dam (Feature 76 – top yellow circle) and Whareatea Dam (L29/49 – bottom yellow circle) in proximity to the alignment of the UWHR (southwestern section – orange line)

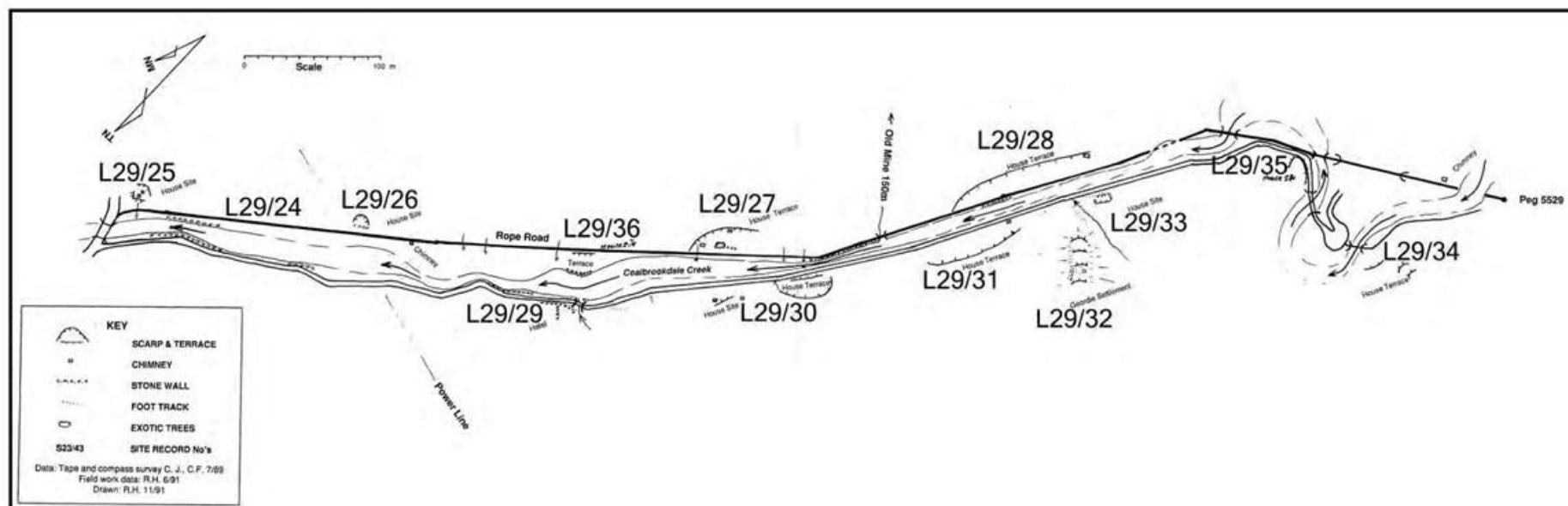


Figure 8. Plan of the archaeological sites at Coalbrookdale. Note that north is to the bottom of the drawing (source: NZAA ArchSite site record form L29/34)

Table 1. Historic features located in proximity to the proposed UWHR alignment (southwestern) (see Figure 6)

NZAA Site No.	Heritage NZ List	Grid Reference (NZTM)	Feature No. (Wright 2001) ⁵	Name / Description
L29/86	Denniston Historic Area	██████ ██████	72, 73, 74	Cascade (Coalbrookdale) Fanhouse. A brick fan house constructed in 1912 that supplied air to Cascade No. 8, Whareatea, Winderland, Topmine and others. Also, the remains of an earlier fan house, the entrance to the Cascade section of the mine, the terrace where the boiler house once stood and was latterly used as a pony paddock, the collapsed remains of stables and office buildings and the foundation of the Cascade winch.
			76	Fan House Dam. At the head of a gully behind the fan house. It supplied mine facilities in this area.
L29/49		██████ ██████	78	Whareatea Dam? Earth cored dam faced with stone rubble some 30m wide, c.10m at base, 4m at crest and c.2m high. Borrow pits in bank on either side.
L29/24	Denniston Historic Area	██████ ██████	61, 70, 65	The rope road formation between Burnett's Face and Coalbrookdale Sheets (sheds)
L29/26	Denniston Historic Area	██████ ██████		House site. A small terrace some 10m by 10m, with stone revetment on the northern side.
L29/36	Denniston Historic Area	██████ ██████		House site. A flat area, excavated beside the rope road, filled with rock and walled to a height of c. 7m beside the stream. Covers an area of 15m by 20m.
L29/27	Denniston Historic Area	██████ ██████		House site. A large terrace some 70m long by 15 to 20m wide on the south side of the rope road. Two building sites are indicated by chimneys at the eastern end.
L29/48		██████ ██████		Benched Track that ran from Burnett's Face down to Cascades Mine. Shown on 1916 geological map. Section destroyed by Cascades Road

⁵ Refer Figure 7 of the accompanying Appendix report: BPCP Historical and Archaeological Background.

UWHR – EASTERN SECTION

Archaeological Background⁶ and Effects on Heritage Sites

There have been several previous archaeological studies within the UWHR – Eastern Section. The area was first surveyed as part of the ‘Coalfields Park Report’ (Sumner and Sumner 1983) and by Les Wright for the Denniston Heritage Concept Plan (2001).

As part of the Escarpment Mine project an archaeological survey was undertaken of a proposed water pipeline from Waimangaroa River to the upper end of the Coalbrookdale Road in the vicinity of Cedar Creek Road (Watson Aug 2010).

Field survey of the proposed UWHR – Eastern section was carried out by the first two authors in November 2024 and March 2025. Bathurst provided LiDAR and georeferenced plans of the known extent of historic underground workings into the Avenza Maps app and the use of GPS, which were used to focus survey. Previously identified heritage features were relocated and a number of unidentified features recorded within and in proximity to the proposed UWHR – eastern section (see **Error! Reference source not found.** and Table 2).

Between the Cascade Mine access road and the Cedar Creek Road, the UWHR will be formed primarily along existing four-wheel drive access tracks with some greenfields construction. This alignment has been selected through the extended options assessment to avoid the archaeological sites and other heritage features at Burnett’s Face north of Coalbrookdale within the Heritage NZ Listed Area – Denniston Historic Area.⁷

Sites and heritage features affected by the UWHR – Eastern section are discussed in detail below.

Iron Bridge Mine (L29/98)

Where the UWHR intersects with Cedar Creek Road it crosses an area of extensive underground mine workings associated with the Iron Bridge Mine (see Figure 9 and **Error! Reference source not found.**). The workings of Iron Bridge Mine around the Burning Mine south of the Waimangaroa River to Cedar Creek Road date from 1887 to 1945.⁸

The main Iron Bridge Mine surface remains (L29/98) are located east of Burnett’s Face on the true right of Burnett’s Stream (southern extension of the Waimangaroa River) and north of Cedar Creek Road (**Error! Reference source not found.**). They consist of the Iron Bridge Mine stone drive, which was the second entrance to this mine, the bathhouse foundations, a chimney and a water tank with the remains of several dwellings/baches associated with Cedar Settlement in the bow of Burnett Stream. These remains are located west and clear of where the UWHR will connect with Cedar Creek Road and will not be

⁶ Refer to the accompanying Appendix report for greater detail on the archaeological background of the wider Project area.

⁷ For detail on the Heritage NZ Listed Area – Denniston Historic Area see the accompanying Appendix report: BPCP Historical and Archaeological Background.

⁸ For more detailed historical background to this site see the accompanying Appendix report: BPCP Historical and Archaeological Background.

affected by construction. This site has been recorded as archaeological site L29/98 in the NZAA ArchSite database.

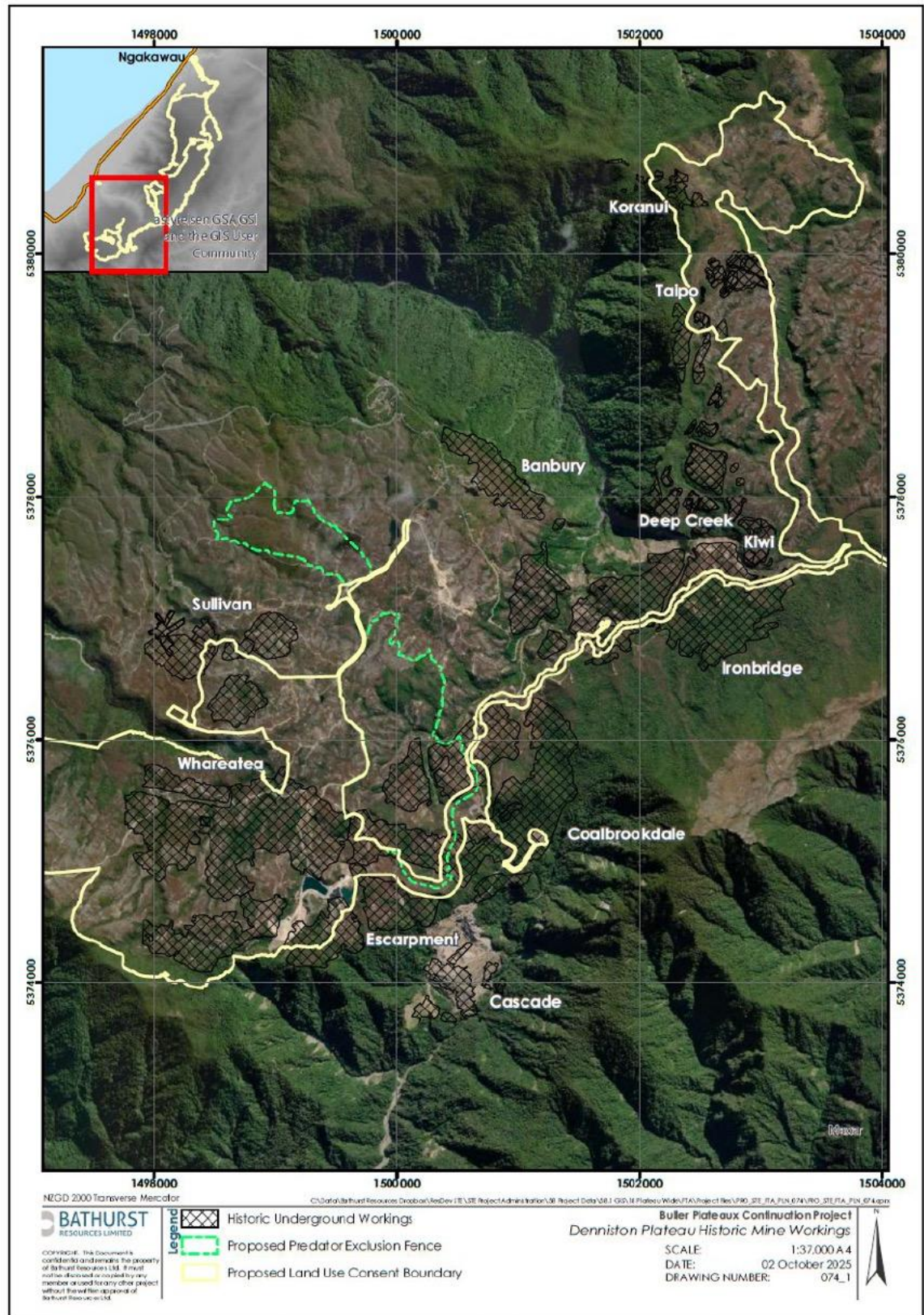


Figure 9. Denniston Plateau historic mine workings in relation to the BPCP (source: Bathurst)

Figure 11 is a 1943 aerial photograph and sketch plan (Sumner and Sumner 1983) of the mining features associated with Burnett's Face to Iron Bridge rope road and mine. Figure 12 is the 1943 aerial showing the location of the Iron Bridge Mine surface remains and Cedar Settlement west and clear of the proposed alignment of the UWHR – Eastern section where it intersects with Cedar Creek Road.

The only other remains identified within or in close proximity to the alignment of the UWHR – Eastern Section within the Iron Bridge Mining area are a return airway (Features 207 and 208), the possible alignment of a rope road/flume (Feature 218) and discarded metal remains (Feature 206) (see **Error! Reference source not found.**).

Metal Remains (Feature 206):

These remains consist of discarded metal rope wire, a beam, plate and other unidentifiable metal remains lying beside the existing Cedar Creek Road (Figure 13). It is not known where these remains originated from and there were no other features located in the vicinity to give them context.

Return Airway (Features 207 and 208):

The remains of the return airway consist of a discarded concrete pillar/foundation of an earlier steam plant that drove the fan (2.3m x 1.3m [top], 1.8m diameter [bottom]) located above and south of Cedar Creek Road at its intersection with the pylon road (Figure 14 and Figure 15). Metal screws are cemented into the top of the pillar which would have anchored machinery. Timbers and metal rods are lying discarded south of the pillar. It is not known which mine this return airway was associated with (Watson Aug 2010).

This was the previous site of a fan wheel (reported by Sumner and Sumner 1983; Watson Aug 2010) lying beside the road, but this is no longer present. Neither the fan nor the return airway pillar is in situ, likely having been dislodged during road construction, but they may indicate the presence of in-situ archaeological deposits below the ground (Watson Aug 2010).

Rope Road?/Flume (Feature 218):

Sumner and Sumner (1983) describe, between the Kiwi Fan House (Features 212 and 213) and the Cedar Creek Road, an old collapsing rope road or possibly a flume which branches off from the creek bed but then is lost in the road construction (Figure 14). They suggested that it may relate to the foundations near the fan wheel.

In the described vicinity of this feature an approximately 7m wide 'track' cutting was relocated that intercepted with the road, which could possibly be the remains of a surface rope road as described by Sumner (Figure 16). However, it could not be followed for any distance due to thick vegetation cover. There are also numerous informal tracks branching off from Cedar Creek Road, and this 'track' could be associated with one of the power lines throughout this area.

Examination of aerial photographs did not identify any rope road alignment in this area, although the site of the in-situ Return Airway and Kiwi Fan House and Compressor chimney is clearly visible (Figure 17).

Elsewhere surface mining remains associated with the Iron Bridge Mine and Kiwi Mine on the Waimangaroa River near Hut Stream, including the Kiwi Mine Fan House and Kiwi

Mine Compressor (Features 212 and 213) are located north and clear of the UWHR – eastern section construction corridor.

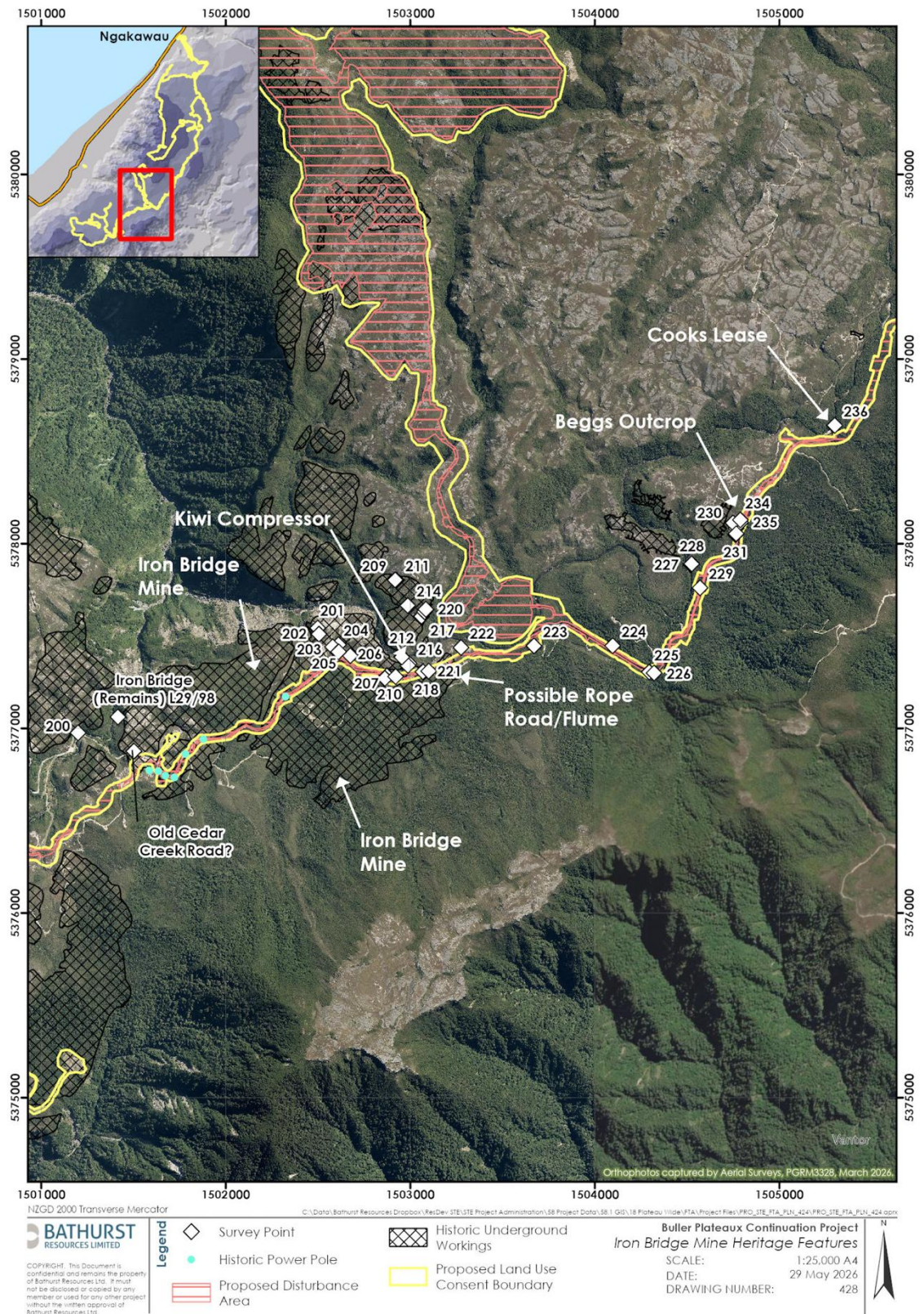


Figure 10. The location of the Iron Bridge, Kiwi and Deep Creek underground mine workings (black hatching) and recorded heritage features (see Table 2) within and in proximity to the proposed UWHR – Eastern Section and the MFS Access Road.

Table 2. Recorded historic features in close proximity to the proposed UWHR – Eastern section (see Error! Reference source not found.). The features highlighted dark grey will be affected and the features highlighted light grey may be affected due to their close proximity to the UWHR footprint; these features are discussed below

Feature No. (ArchSite No.)	Wright No. (2001) ⁹	Grid Reference (NZTM)	Description
(L29/98)	44		Iron Bridge Mine – stone drive (second entrance), bathhouse foundation, a chimney and water tank, remains of dwellings dam in creek Cedar Settlement – steps and chimney of Webb’s house, stone wall
	48		
	45		A short section of the original Cedar Road, now passed by a new road cutting
201			Wooden pile, part of bridge over the gully?
202			Wooden pile, part of bridge over the gully?
	90		A flat area and reported location of a Whippet Track where locals would race these dogs
203			Metal peg in the ground
204			Metal peg in the ground
205			Track cutting (western end), metal spike with eye to attach cable. Modern power pole in the vicinity
206			Metal remains – rope wire, beams, plate See Figure 13
207 208 (L29/98)	46		Site of Return Airway. Base of a concrete pillar/foundation (D209) (2.3m x 1.3m (top), 1.8m (bottom) located above and south of the road at its intersection with the pylon road. Metal screws are cemented into the top of the pillar which would have anchored machinery. Timbers and metal rods lying discarded south of the pillar Previous site of a fan wheel (reported by Sumner) lying beside the road but no longer present See Figure 15
212 213 (L29/101)	92, 93		Kiwi Fan House and Compressor. Iron Bridge Mine return airway with doors. Foundations of the Kiwi Fan House. Concrete bridge foundations. Kiwi Compressor – power house and machine foundations, boiler remains and a brick reclining chimney. At the top the chimney is 1.2m in diameter. Collapsed mid-section is open seen as a 1-2m deep cutting approximately 2m wide See Figure 19 – Figure 22
216			Metal rivetted pipe at the top of the Kiwi Fan House chimney – 9m long made of 0.8m sections of metal plate

⁹ Refer Figure 7 of the accompanying Appendix report: BPCP Historical and Archaeological Background.

Feature No. (ArchSite No.)	Wright No. (2001) ⁹	Grid Reference (NZTM)	Description
218 (L29/98)			Possible rope road/flume alignment (eastern end) approximately 7m wide, which branched off from the creek bed near the fan house but is lost in the road construction (Sumner 147) See Figure 16
222			Scattered broken historic bottles – black beer bottle neck and shoulder with a hand applied lip; molded green wine bottle; stopper lid of an aqua-green aeriated water bottle ‘...olbrook...’ embossing, scattered smashed green glass. No associated features to provide context for these bottles
224			Track to creek
225 226			Small metal pipe lies half buried across the road immediately west of a road bridge. Beneath the bridge are the discarded bearers and timbers of an earlier bridge, now replaced with concrete piles and a new bridge. Timbers also lying beside (north) of the bridge and a disused rail iron power pole
227 228			Private Mine at Horseshoe Bend
229			Old concrete culvert under road bridge. Likely the road previously crossed the stream via a ford
230 233 232 234 235 231 (L29/99)			Beggs Outcrop (230) - Powerhouse (233) (D215) - Main Coal Face (232) - Small coal face (234) - Coal Bins (235) - Administration block (231)
236 (L29/102)			Open Cast Mine – Cooks Lease. Metal cables the remains of a swing bridge over the river

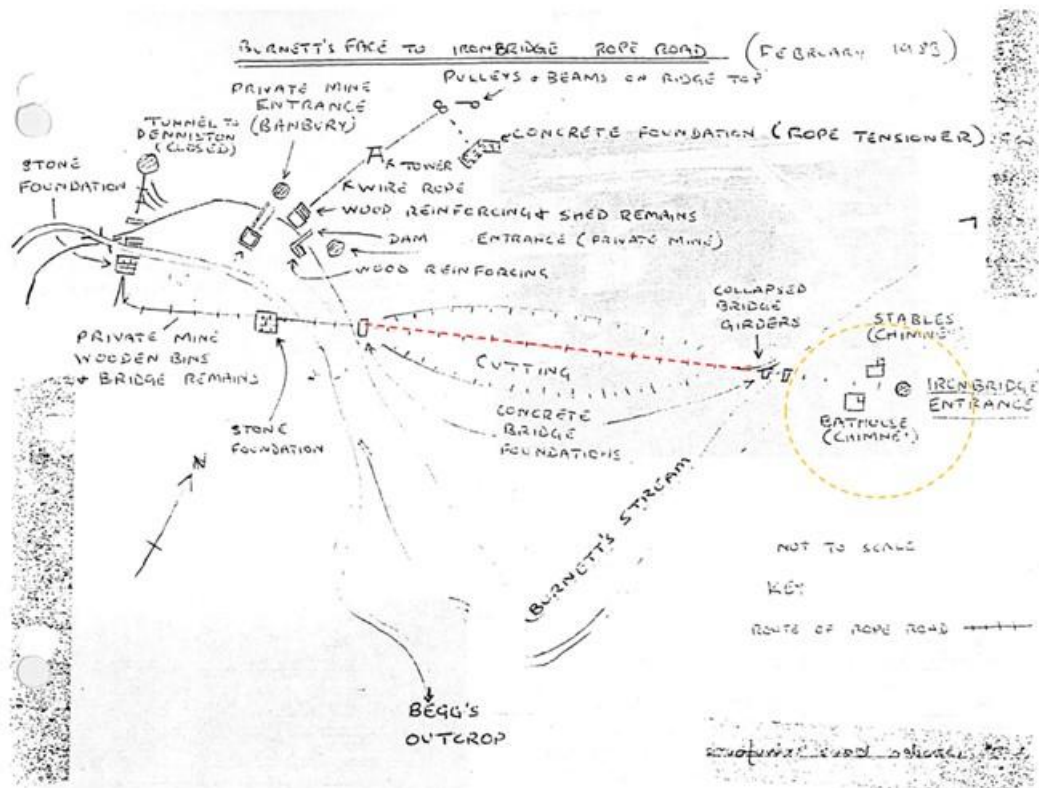


Figure 11. 1943 aerial photograph (bottom) and sketch plan (top) of Coalbrookdale–Burnett's Face (left) to Iron Bridge rope road and mine (right). The Iron Bridge rope road cutting is indicated with the red line and the mine with the orange circle (Retrolens SN264 Run No. 786 Photo 12; Sumner and Sumner 1983)

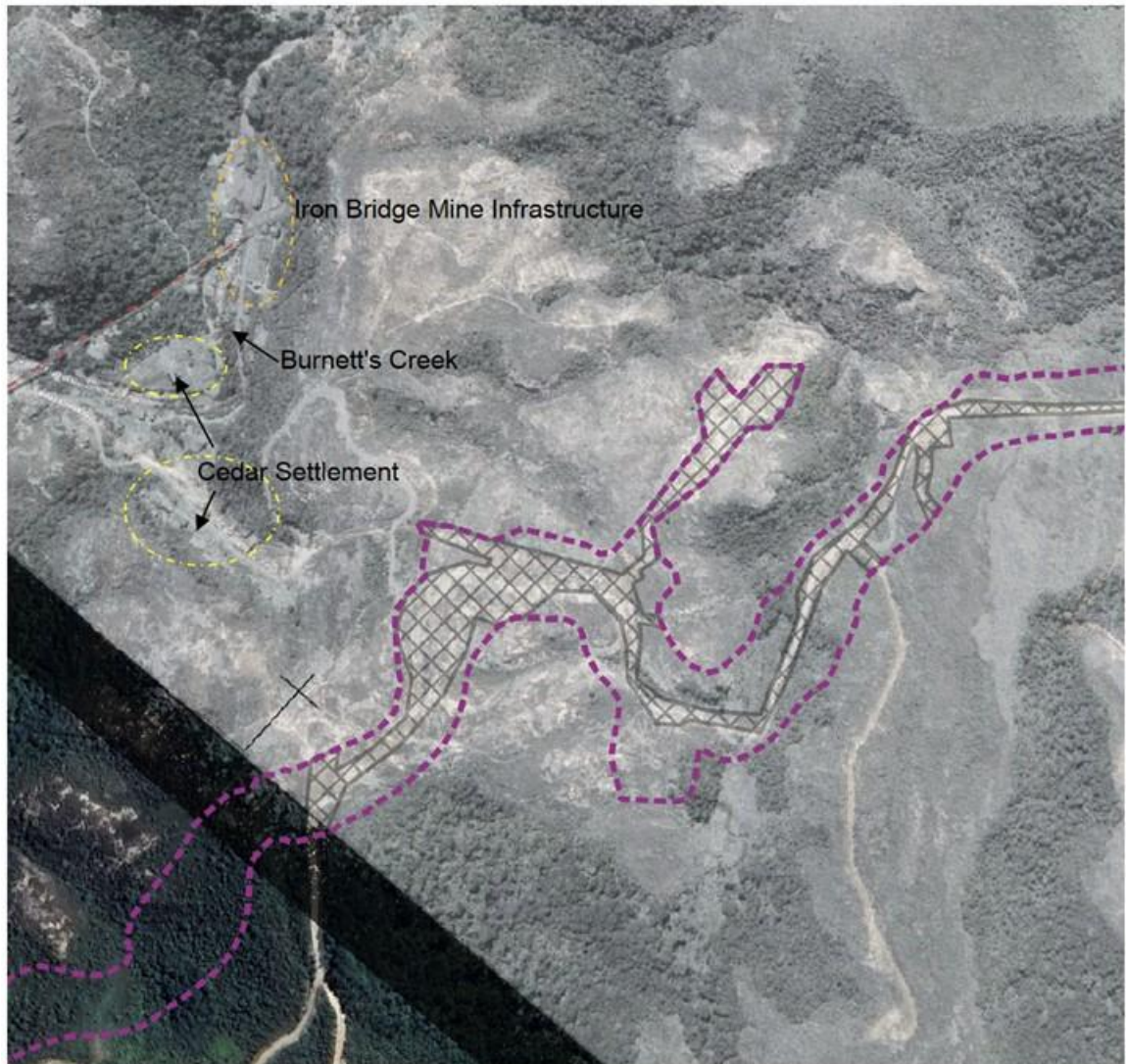


Figure 12. 1943 aerial photograph showing the proposed alignment of the UWHR (purple dashed line) in relation to the Iron Bridge Mine L29/98 (orange circle) and Cedar Settlement (yellow circles) (source: Retrolens SN264 Run No. 786 Photo 12)



Figure 13. Feature 206 metal remains – rope wire, beams, plate

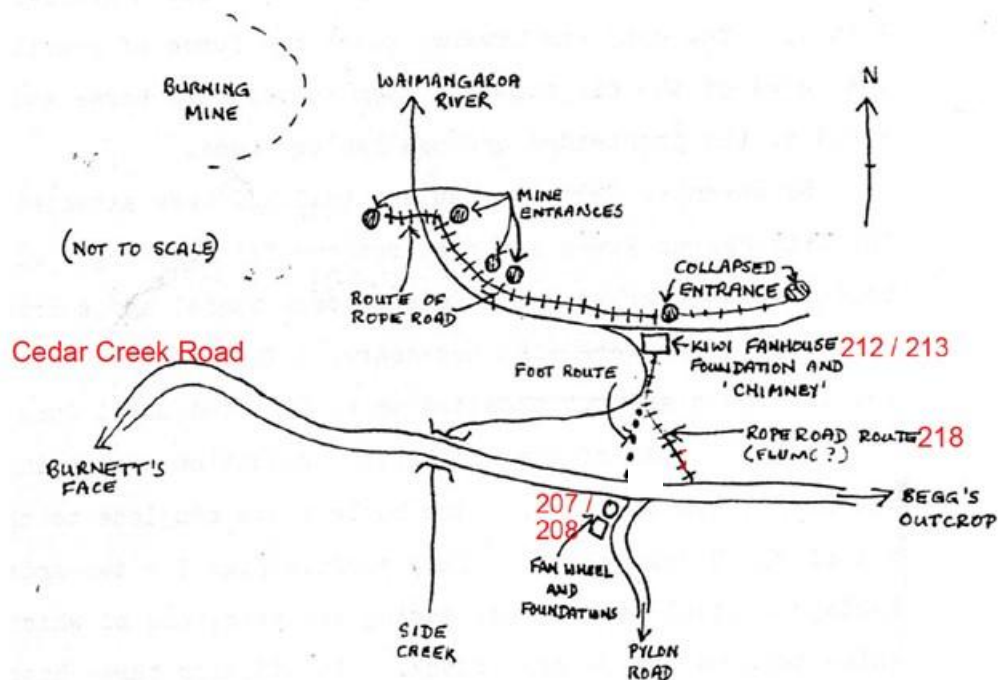


Figure 14. Features recorded in proximity to the Kiwi Fanhouse/Compressor and UWHR – Eastern section (source: Sumner and Sumner 1983:143). The feature numbers recorded during survey are shown in red (refer Table 2)



Figure 15. Features 207/208, Return Airway concrete pillar/foundation located above and south of the road at its intersection with the pylon road



Figure 16. Feature 218, possible rope road/flume alignment cutting (east end)



Figure 17. 1946 aerial showing the Return Airway site (Features 207 and 208 circled) and the Kiwi Compressor / Fan House chimney (red arrow) (Features 212 and 213) in relation to Cedar Creek Road (Retrolens SN264B Run No. 1275 Photo No. 12)

Effects of the UWHR – Eastern Section

The UWHR within the existing Cedar Creek Road alignment crosses an area of extensive underground mine workings associated with the Iron Bridge Mine. The main Iron Bridge Mine surface remains and associated Cedar Settlement are located on the true right of Burnett's Stream (southern extension of the Waimangaroa River) north of Cedar Creek Road and west of where the UWHR will connect with the road and will not be affected by construction.

The proposed road works for the UWHR across this area are primarily located within the already modified road corridor of Cedar Creek Road and generally will not be of a depth or extent to impact on underground mine workings. However, in places the Iron Bridge Mine underground workings are known to be very shallow so these may need to be purposefully collapsed, to avoid subsidence when the road is excavated and constructed.

The proposed UWHR – Eastern section will impact on remains of the Return Airway (concrete pillar) that are not in situ, but these remains could be moved south and uphill out of the construction corridor. However, there may be other in-situ archaeological deposits below the ground in this area that were associated with the Return Airway site.

Part of a possible rope road/flume alignment may be impacted upon where it intersects with the existing road alignment, but this is an unconfirmed feature and consists of a track cutting.

Some discarded metal remains of unknown origin will also be impacted upon, but these remains could be moved north outside the construction corridor.

Power Poles

There are approximately 28 power poles recorded between Burnett's Face and the Waimangaroa River constructed from vertical railway irons with wooden cross-pieces. Ceramic insulators remain in situ on some of the power poles (see **Error! Reference source not found.** and Figure 18). Twelve of the power poles are located on the edge of the Cedar Creek Road, and some have been dislodged by construction and/or maintenance of the road. The remainder are at varying distances from the road.

These older power poles could have been associated with a power line to any of the mines that operated down the Cedar Creek Road, with the power line appearing to end at Beggs Outcrop. These mines operated from the 1950s through until the 1970s, although none for particularly long (Wright 2008: 55-56).

Effects of the UWHR Proposal – East Section

The construction of the UWHR will likely remove between 8 and 12 of these older power poles located in proximity to the existing Cedar Creek Road. If it is not possible to avoid damaging the power line, the entire power line should be recorded, and the source and destination of the power line should be established.



Figure 18. A power pole located immediately above Cedar Creek Road and the proposed UWHR construction corridor

Kiwi Mine Fan House and Compressor (L29/101 Kiwi Mine)

The Kiwi Mine Compressor and fan supplied air and power to sections of the Ironbridge Mine. The Compressor was under construction in 1899 and built in a central position midway between the Cedar Creek Dip and North Waimangaroa coalfield to supply power to the workings. The Chief Inspector of Mines noted in his report the spacious housing and ample capacity to drive all the underground haulage machinery, pick machines, and pumps. The steam was supplied by Roots tubular boilers. In 1901 more steam and machine power was installed. In 1902 a 7' Schiele fan was dismantled and being re-erected in the Ironbridge Mine. In 1929 the old fans at Kiwi were dismantled and a 40' Sirrocco fitted (Sumner and Sumner 1983).

This site has been recorded as archaeological site L29/101 in the NZAA ArchSite database. The remains of the Kiwi Mine Fan House and Compressor (Features 212 and 213) comprise the power house and machine concrete foundations (Figure 19) and a brick reclining airway/chimney that was built up the hillside (Figure 20 and Figure 20). This air shaft chimney is half built of double brick and half carved out of the rock. The shaft is roughly oval, being c.2m high and c.1m wide with a double brick roof. The chimney is only partially intact and the rest has caved in. Next to the chimney shaft on top of the hill are the broken remains of the vertical metal chimney (Figure 22). In the river banks of the Waimangaroa River north branch are cuttings into the rock and concrete foundations with metal pins that either supported the main girder bridge across the river or the smaller second bridge that accessed a mine to supply coal for the compressor furnace.

The Kiwi Mine Fan House and Compressor site associated with the Iron Bridge Mine, is located north and clear of the UWHR construction corridor at the confluence of the Gomorrah Stream with the Waimangaroa River north branch and will not be affected (**Error! Reference source not found.**). However, its brick reclining air shaft chimney is partially collapsed and structurally vulnerable to further collapse.



Figure 19. Looking down from the top of the reclining chimney to the power house and machine concrete foundations of the Kiwi Fan House and Compressor



Figure 20. A partially intact section of the Kiwi Mine Fan House and Compressor brick reclining airway/chimney



Figure 21. Looking up along a collapsed section to the top intact of the Kiwi Mine Fan House and Compressor brick reclining airway/chimney



Figure 22. Broken metal remains of the vertical chimney at the top of the brick reclining airway/chimney of the Kiwi Mine Fan House and Compressor

Beggs Outcrop (L29/99)

The State Mines Department prepared Beggs Outcrop or Cedar(dale) Creek Mine in the late 1950s and early 1960s. The coal was intended for the proposed New Plymouth coal-fired power station, but when the government discarded coal in favour of oil and natural gas, development at Beggs Outcrop came to a standstill. There was then no market for high sulphur coal.

In the 1980s the State Department was talking about open-casting and mixing this coal with cleaner coal from elsewhere. State Mines bulldozed the face of the seam clear. The bins were built and then taken down (in 1981) to be rebuilt at the recently reopened Whareatea Mine (Sumner and Sumner 1983:156).

Archaeological Background

This site has been recorded as archaeological site L29/99 in the NZAA ArchSite database. Figure 23 Beggs Outcrop consists of three old mine entrances (Figure 23). The most northerly is 2m wide x 3m high with some remaining timbers still visible inside and a stream now runs out of the mine (Figure 24). Approximately 50m to the south is the second mine entrance which is half-boarded over and inside are old props. Part of an old pump lies below the entrance. Approximately 60m south of the second entrance is the third mine shaft which is closed by fallen rock. Below the entrance are a couple of pieces of iron fluming.

Other remaining structures include the foundation of the concrete transmission (power) house (5.5m x 4m), which is located immediately adjacent to the road where the power line ends (Feature 233). Railway iron tracks stand around the foundation edge that were used as building beams. The former site of the administration block, which is no longer standing, comprises the base of a brick chimney, with scattered corrugated iron, other building materials and bricks (Feature 231) (Figure 25); and the concrete foundations of two adjoining coal bins 12m long x 9m wide (Feature 235) (Figure 26).

Two exposed coal seams are located north of the site's structural remains that were bulldozed clear in the bank behind the buildings site. The largest seam located behind the administration block is 4.5m high (Feature 232) (Figure 27). The smaller seam is behind the coal bin foundations.

The aluminium shed (dunny?) shown in the Sumner sketch (Figure 23) on the southern side of the road is no longer present.

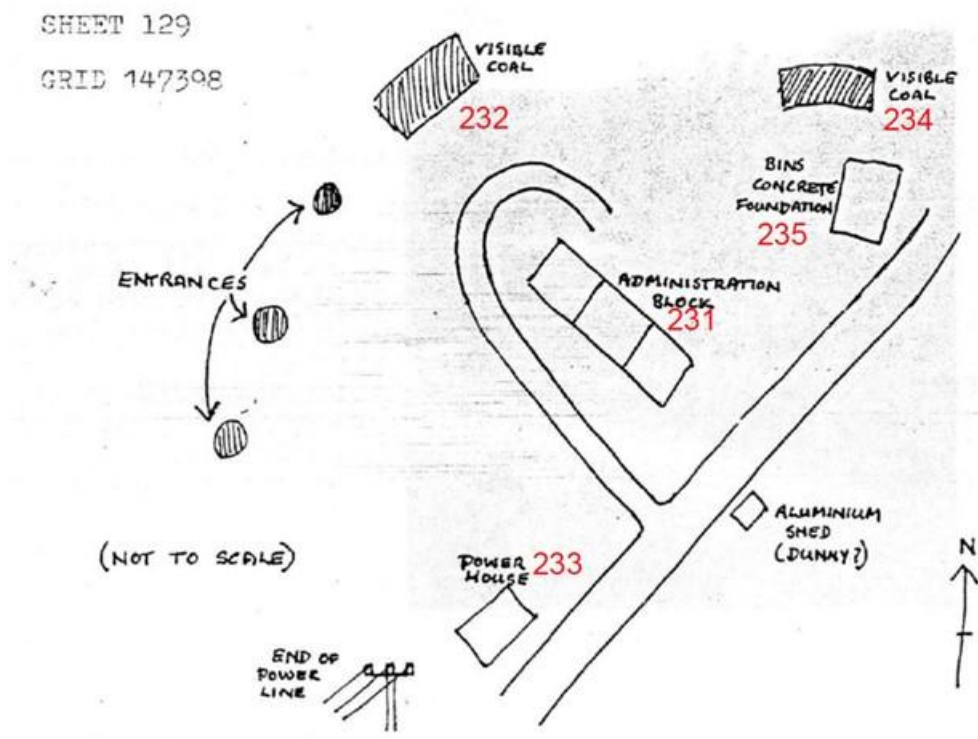


Figure 23. Beggs Outcrop with recorded features marked (source: Sumner and Sumner 1983 sketch:156). The feature numbers recorded during survey are shown in red (refer Table 2)



Figure 24. Northerly mine entrance at Beggs Outcrop



Figure 25. Feature 231, remains of the administration block at Beggs Outcrop



Figure 26. Feature 235, concrete coal bin foundations at Beggs Outcrop



Figure 27. Feature 232, main exposed coal face at Beggs Outcrop



Figure 28. Looking northeast across the Cedar Creek Road towards the Beggs Outcrop site

Effects of the UWHR Proposal– Eastern Section

Beggs Outcrop is located immediately beside and north of the existing Cedar Creek Road. A small bund of earth is currently built on the northern side of the road due to road maintenance (Figure 28). Any widening of the existing road to the north for the UWHR would undoubtedly impact the remains of the power house, concrete coal bin foundations and possibly the remains of the administration block at Beggs Outcrop. To avoid these features, it is proposed to widen the road along its southern edge to construct the UWHR through this area. This was the location of a small aluminium shed (dunny?) that is no longer present and possibly other subsurface features.

Cooks Lease Area (L29/102)

This area of what was known as Cooks Lease was leased to Marshall and Co. in 1952. It was estimated to contain 20,000 tons of coal. It was operated by open cast methods – 10ft (3.048m) of overburden was removed to reach 20ft (6.096m) of coal. The coal was transported by truck to the ‘Wooden Bridge’ at Denniston, where it was transferred to coal tubs which then carried the coal to the Brakehead and down the incline. In 1953 bad weather severely hampered production.

Archaeological Background

This site has been recorded as archaeological site L29/102 in the NZAA ArchSite database. Three quarters of a mile beyond and across the Waimangaroa River from Beggs Outcrop is the remains of a swing bridge. Four metal cables are strung across the river upstream from the ford but are slack and unconnected (Feature 236). All that is now left of the mine is an area of 400 yards x 150 yards (366m x 137m) of rubble and spoil heaps and outcrops of flakey coal.

There has been regrowth of lichen, manuka, tussock, sedge grass and gaultheria and amongst it there are occasional rusted-out pipes, pieces of rusty ¼ inch (c.6mm) plate, and wire cables.

Effects of the UWHR Proposal– Eastern Section

The widening of the existing road for the UWHR would remove some of the rubble and spoil heaps, outcrops of flakey coal and discarded metal remains at this 1950s area of open cast mining at L29/102.

The only other features of some interest, but little heritage value, along the UWHR – Eastern section construction corridor include a small metal pipe lying half buried across the road immediately west of a road bridge. Beneath the bridge are the discarded bearers and timbers of an earlier bridge (Figure 29), now replaced with concrete piles and a new bridge (Feature 225 and 226). Timbers are also lying beside (north) of the bridge and there is a disused rail iron power pole. It is not known where these remains originated and there were no other features located in the vicinity to give them context.



Figure 29. Features 225/226 beneath the modern road bridge are the discarded bearers and timbers of an earlier bridge

UWHR DISCUSSION AND CONCLUSIONS

Summary of Results

The southwestern section of the proposed UWHR will cross within the very southern end of the Category I Heritage NZ Listed Area – Denniston Historic Area, and Te Tai o Poutini Plan (TTPP) Heritage Schedule – Denniston Historic Area (HH5), which includes recorded archaeological sites associated with the Coalbrookdale Mine (1884 -) and ‘Village of Coalbrookdale’ (1891-1956). However, within that area it will not impact on any known archaeological and other historic heritage sites or features.

The existing Cedar Creek Road and proposed route of the UWHR crosses an area of extensive underground mine workings associated with the Iron Bridge Mine (L29/98). The workings of Iron Bridge Mine through this area south of the Waimangaroa River to the haul road date from 1887 to 1945. Remains of the Return Airway (concrete pillar) that are not in situ and possibly other associated in-situ archaeological deposits are located immediately adjacent to the existing Cedar Creek Road. Also, there is part of a possible rope road/flume alignment which may be impacted, but this is an unconfirmed feature and consists of a track cutting. Some discarded metal remains of unknown origin will also be impacted upon, but these remains could be moved north outside the construction corridor.

Cedar Creek Road and the proposed route of the UWHR also crosses within the mid-20th century mining sites of Beggs Outcrop or Cedar(dale) Creek Mine (L29/99) and the Cooks Lease Area (L29/102).

Approximately 28 power poles are recorded between Burnett’s Face and Beggs Outcrop, which are remnants of a power line that had provided power to the mid-20th century mines down the Cedar Creek Road. Eight to twelve of these are located in proximity to the existing Cedar Creek Road.

The Kiwi Mine Compressor site (L29/101) associated with the Iron Bridge Mine, is located north and clear of the UWHR construction corridor. However, the brick reclining air shaft chimney of the Kiwi Compressor is partially collapsed and structurally vulnerable to further collapse.

Māori Cultural Values

This report is an assessment of effects on archaeological and historic heritage values and does not include an assessment of effects on Māori cultural values. It is noted that an assessment of effects on Māori values should only be made by the tangata whenua and this will be provided by tangata whenua as a separate Cultural Values and Impact Assessment. Māori cultural concerns may encompass a wider range of values than those associated with archaeological sites.

The historical association of the general area with the tangata whenua is evident from the recorded sites, traditional histories and known Māori place names and is considered in more detail in the accompanying Appendix report: BPCP Historical and Archaeological Background.

Te Rūnanga o Ngāti Waewae are the Papatipu Rūnanga with manawhenua in the the Kawatiri (Buller) district. As with other areas of Te Tai Poutini, the coastal hills and plateau areas north of the Kawatiri (Buller) River are part of the larger network of trails, trading routes, pā and kāinga sites, mahinga kai, and other areas of cultural significance.

The abundance of mahinga kai is evidenced by the names of waterways in the vicinity of the Waimangaroa valley, including Weka Creek, Kiwi Creek, and Keruru Stream (Te Rūnanga o Ngāti Waewae 2026). The name Waimangaroa referring to long black water, because at one time the river discharged its waters into a dark coloured lagoon that ran parallel to the beach (Tumahai Jul 2010:24).

There are currently no archaeological sites of Māori origin recorded within the UWHR Project sub-area. However, the absence of evidence is not necessarily evidence of absence; particularly, as much of the historic mining evidence is associated with underground mining on the Denniston Plateau.

Archaeological/Historic Heritage Value and Significance

Part of the UWHR is located on land administered by DOC, therefore, the Conservation Act 1987 is also relevant for this Project sub-area. The values of historic heritage resources on conservation land need to be assessed to establish their significance and what the appropriate management strategy is, given that level of significance, irrespective of whether they have archaeological restrictions under the HNZPTA or heritage restrictions under the District Plan.

The West Coast Regional Council's (WCRC) Regional Policy Statement (RPS) (Jul 2020: Chapter 4, Method 3) identifies several criteria for evaluating the significance of historic heritage places. These are based on the criteria for inclusion in the New Zealand Heritage List/Rārangi Kōrero set out in Section 66 of the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) and are:

- a) The extent to which the place reflects important or representative aspects of New Zealand history;
- b) The level of association of the place with events, persons, or ideas of importance in the history of the (district/region);
- c) The importance of the place to Poutini Ngāi Tāhu;
- d) The level of community association with, or public esteem for, the place;
- e) The potential of the place for public education;
- f) The level of technical accomplishment or value, or design of the place including the rarity of technical accomplishment or design;
- g) The symbolic or commemorative value of the place;
- h) Whether it is an historic place known to date from early periods of the district's settlement i.e., such items are likely to be included in the schedule;
- i) The rarity of the type of historic place; and
- j) The extent to which the place forms a key part of a wider historical and cultural complex or historical and cultural landscape.

In addition, Heritage NZ has provided guidelines setting out criteria that are specific to archaeological sites (condition, rarity, contextual value, information potential, amenity value and cultural associations) (Heritage NZ 2019: 9-10).

The archaeological value of sites relates mainly to their information potential, that is, the extent to which they can provide evidence relating to local, regional and national history

using archaeological investigation techniques, and the research questions to which the site could contribute. The surviving extent, complexity and condition of sites are the main factors in their ability to provide information through archaeological investigation. For example, generally pā are more complex sites and have higher information potential than small midden (unless of early date). Archaeological value also includes contextual (heritage landscape) value. Archaeological sites may also have other historic heritage values including historical, architectural, technological, cultural, aesthetic, scientific, social, spiritual and traditional values.

In the discussions below, both sets of criteria have been used to assess the value and significance of the pre-1900 archaeological sites, and the RPS criteria have been used to assess 20th century historic heritage sites that will or may be affected by the Project, as well as the significance of the Denniston heritage landscape that these sites contribute to. This also means that the following assessment meets the criteria referred to by DOC for assessing the significance of historic heritage.

The UWHR Project sub-area will cross within the very southern extent of the Heritage NZ Listed Area – Denniston Heritage Area, a Category I historic place (NZ Heritage List No. 7049).

The Te Tai o Poutini Plan (TTPP) is the proposed combined Buller, Grey and Westland District Council Plan, which will replace the current individual district plans. TTPP Schedule One: Historic Heritage Items and Areas and Schedule 1B: Archaeological Sites (Te Rārangī Tuatahi: Ngā Rawa me ngā Whenua Tuku Iho) has included the Denniston Historic Area (HH5 and ARCH5), for archaeological, historical, social and technological values. The extent of the TTPP scheduled area reflects the NZ Heritage Listed Area – Denniston Heritage Area. However, there are no known archaeological sites or other historic heritage features located within the affected area.

Denniston Heritage Landscape

A detailed discussion of the historic heritage and archaeological values of the Denniston Plateau is provided in the accompanying Appendix report: BPCP: Historical and Archaeological Background.

The importance of the wider contextual values of Denniston Plateau is acknowledged as a nationally significant industrial heritage landscape and the premier historic coal mining site in New Zealand comprising numerous inter-related elements of historic coal mining, including mines, transport networks and settlement sites. Its historic coal mining landscape spans a depth of time (all periods of mining are represented) and it is more complete than any other in New Zealand (much remains of mine sites from all periods and some of these remains are rare). The area has been identified as one of New Zealand's most important industrial archaeological landscapes and an outstanding historic site (Breen Oct 2010; Wilson and Burgess Dec 2007:7).

It is impossible to properly understand one of the mining sites on the plateau (and its significance) in isolation from the others. These sites were part of a system and are now part of an archaeological landscape that covers a large geographic area, and that spans over a hundred years, stretching back to the 1870s. Therefore, sites need to be considered as an integral and important part of the wider historic context/historic landscape of the Denniston Plateau, an extensive and relatively complete coal mining landscape that is unrivalled in New Zealand. While the Denniston Plateau is mostly celebrated for its early history and

incline, it is one of the few places in New Zealand that has such a long history of coal mining and where so much tangible evidence of that history remains.

Due to the proposed length of the UWHR it will cross a considerable amount of the Denniston Plateau and part of the Stockton Plateau, in proximity to a number of mining sites within this significant wider historic coal mining landscape.

Iron Bridge Mine (L29/98)

The Ironbridge Mine is the beginning of the workings which extend to the Burning Mine and Kiwi Mine, over the Waimangaroa River and up the flanks of Mt. Frederick. Development of the Iron Bridge Mine began in 1882 with the workings of the mine substantially expanding by 1899, reaching the area south of the Waimangaroa River to the haul road and within the UWHR Project sub-area. Therefore, surface remains and underground workings may date to before 1900 and are an archaeological site as defined within the HNZPTA.

An assessment of the archaeological value of the Iron Bridge Mine (L29/98) based on the RPS and Heritage NZ criteria is provided below in Table 3. Assessment of the historic heritage significance of site L29/98 Iron Bridge Mine based on the criteria in the WCRC RPS

Criterion	Comment	Significance Evaluation
Historic values	Iron Bridge Mine was a substantial coal mine on the Denniston Plateau and operated for over 50 years. With Coalbrookdale it was one of two major Westport Coal Company mines in operation by 1888, with over 100 men employed underground. The Westport Coal Company was a major player in coal mining on the Denniston and Stockton plateaux until the State takeover of mines in both areas in the mid-late 1940s. Iron Bridge Mine is part of the story of the development of the Westport Coal Company and Denniston.	High
Importance of the place to Poutini Ngāi Tahu	No known importance	n/a
Community Associations	Within the West Coast and Denniston community there is a strong association with the coal mining industry. Coal mining is still a major industry on the West Coast and mines like Iron Bridge would have a social significance for local communities. Relatives of those who worked at the site, are likely to have associations with the place.	Moderate
Public education potential	Iron Bridge Mine has good public education potential due to its association and proximity to the sites along the Coalbrookdale Walkway. Public access and interpretation could easily be developed from Burnett's Face and Cedar Creek Road to the main Iron Bridge surface remains east of Burnett's Stream, which comprise of the stone drive (second mine entrance),	High

Criterion	Comment	Significance Evaluation
	the bathhouse foundations, a chimney and a water tank, with the remains of several dwellings/baches associated with Cedar Settlement	
Technological value	The mining techniques used at the Iron Bridge Mine were not unique from other West Coast mining areas, although it did operate for over 50 years and the underground workings are extensive. The eastern workings of the Iron Bridge Mine were the deepest in the entire Buller Coalfield.	Moderate
Symbolic / Commemorative values	No known values	n/a
Early period of the district's settlement	The site is associated with early coal mining activity on the Denniston Plateau the Buller district. In 1882 the Banbury Mine was driven right through to Burnett's Face from where more developments began, including the Iron Bridge and Coalbrookdale mines.	High
Rarity	The Iron Bridge Mine is not rare, being a continuation of expanding underground coal mining on the Denniston Plateau from the late 19th century into the early – mid-20th century. This site is not scheduled in the District Plan.	Limited
Historical and cultural landscape.	The site is part of the wider historical coal mining landscape throughout the Buller region and specifically the nationally significant industrial heritage landscape of the Denniston Plateau. This site has a strong association with the other coal mining features on the Denniston Plateau. It was linked by underground mining expansion and the coal haulage system from Burnetts Face, through to encompass the Kiwi Mine, over the Waimangaroa River and up the flanks of Mt. Frederick to the Deep Creek and Taipo Mines. This site reflects representative aspects of the local and regional history and is part of the story of development of the Westport Coal Company and coal mining on the Denniston Plateau.	High

Table 4 and Table 4, as this site has not been previously assessed. Overall, this site is moderate to high heritage value and significance.

Table 3. Assessment of the historic heritage significance of site L29/98 Iron Bridge Mine based on the criteria in the WCRC RPS

Criterion	Comment	Significance Evaluation
Historic values	Iron Bridge Mine was a substantial coal mine on the Denniston Plateau and operated for over 50 years. With Coalbrookdale it was one of two major Westport Coal Company mines in operation by 1888, with over 100 men employed underground. The Westport Coal Company was a major player in coal mining on the Denniston and Stockton plateaux until the State takeover of mines in both areas in the mid-late 1940s. Iron Bridge Mine is part of the story of the development of the Westport Coal Company and Denniston.	High
Importance of the place to Poutini Ngāi Tahu	No known importance	n/a
Community Associations	Within the West Coast and Denniston community there is a strong association with the coal mining industry. Coal mining is still a major industry on the West Coast and mines like Iron Bridge would have a social significance for local communities. Relatives of those who worked at the site, are likely to have associations with the place.	Moderate
Public education potential	Iron Bridge Mine has good public education potential due to its association and proximity to the sites along the Coalbrookdale Walkway. Public access and interpretation could easily be developed from Burnett's Face and Cedar Creek Road to the main Iron Bridge surface remains east of Burnett's Stream, which comprise of the stone drive (second mine entrance), the bathhouse foundations, a chimney and a water tank, with the remains of several dwellings/baches associated with Cedar Settlement	High
Technological value	The mining techniques used at the Iron Bridge Mine were not unique from other West Coast mining areas, although it did operate for over 50 years and the underground workings are extensive. The eastern workings of the Iron Bridge Mine were the deepest in the entire Buller Coalfield.	Moderate
Symbolic / Commemorative values	No known values	n/a

Criterion	Comment	Significance Evaluation
Early period of the district's settlement	The site is associated with early coal mining activity on the Denniston Plateau the Buller district. In 1882 the Banbury Mine was driven right through to Burnett's Face from where more developments began, including the Iron Bridge and Coalbrookdale mines.	High
Rarity	The Iron Bridge Mine is not rare, being a continuation of expanding underground coal mining on the Denniston Plateau from the late 19th century into the early – mid-20th century. This site is not scheduled in the District Plan.	Limited
Historical and cultural landscape.	The site is part of the wider historical coal mining landscape throughout the Buller region and specifically the nationally significant industrial heritage landscape of the Denniston Plateau. This site has a strong association with the other coal mining features on the Denniston Plateau. It was linked by underground mining expansion and the coal haulage system from Burnetts Face, through to encompass the Kiwi Mine, over the Waimangaroa River and up the flanks of Mt. Frederick to the Deep Creek and Taipo Mines. This site reflects representative aspects of the local and regional history and is part of the story of development of the Westport Coal Company and coal mining on the Denniston Plateau.	High

Table 4. Assessment of the archaeological values of site L29/98 Iron Bridge Mine based on Heritage NZ criteria (Heritage NZ 2019: 9-10)

Value	Assessment
Condition	The main surface remains of the Iron Bridge Mine south of the Waimangaroa River consist of the stone drive (second mine entrance), the bathhouse foundations, a chimney and a water tank with the remains of several dwellings/baches associated with Cedar Settlement in the bow of Burnett Stream. Collectively this site is the beginning of extensive underground mine workings which extend to the burning mine, Kiwi Mine, over the Waimangaroa River and up the flanks of Mt. Frederick to the Deep Creek and Taipo Mines.
Rarity	The Iron Bridge Mine is not rare, being a continuation of expanding underground coal mining on the Denniston Plateau from the late 19th century into the early – mid-20th century.
Contextual value	This site reflects representative aspects of the local and regional history and is part of the story of development of the Westport Coal Company and coal mining on the Denniston Plateau. This site has a strong association with the other coal mining features on the Denniston Plateau. It was linked by underground mining expansion and the coal haulage system from Burnett's Face through to encompass the Kiwi Mine, over the Waimangaroa River and up the flanks of Mt. Frederick to the Deep Creek and Taipo Mines.
Information potential	The information potential of the Iron Bridge Mine is relatively good, both from primary and secondary sources. Some survey and relocation of heritage features have taken place but further information could be gained through a more detailed spatial analysis of the wider Iron Bridge Mine site.
Amenity value	The Iron Bridge Mine is located on LINZ land and is relatively accessible from Cedar Creek Road. It has high potential amenity value if access was developed from Burnett's Face and Cedar Creek Road to the main surface remains east of Burnett's Stream and further to Kiwi Mine remains, across the Waimangaroa River and up the flanks of Mt. Frederick to the Deep Creek Mining remains.
Cultural associations	The site is associated with early European settlement and industry in the region
Other	This site dates from an early period of the districts settlement and also has historical, public education potential and some technological values. It is part of and contributes to a wider historic landscape

Beggs Outcrop Mine (L29/99)

Beggs Outcrop was a small mid-20th century state-owned coal mine operating in the late 1950s and early 1960s.

An assessment of the historic heritage value of Beggs Outcrop (L29/99) based on the RPS is provided below in Table 5 as this site has not been previously assessed. Overall, this site has limited - moderate value and significance.

Table 5. Assessment of the historic heritage significance of site Beggs Outcrop (L29/99) based on the criteria in the WCRC RPS

Criterion	Comment	Significance Evaluation
Historic values	Beggs Outcrop is an example of a small mid-20th century state-owned coal mine of short duration. This site reflects representative 20th century aspects of the local and regional history and is part of the story of development of the State Mines	Limited - Moderate

Criterion	Comment	Significance Evaluation
	Department and coal mining on the Denniston Plateau.	
Importance of the place to Poutini Ngāi Tahu	No known importance	n/a
Community Associations	Within the West Coast and Denniston community there is a strong association with the coal mining industry. Coal mining is still a major industry on the West Coast and mines like Beggs Outcrop would have a social significance for local communities. Possibly those who worked at the site or their relatives, are likely to have associations with the place.	Limited
Public education potential	Beggs Outcrop has some public education potential by its proximity to Cedar Creek Road and a variety of remnant mid-20th century mining remains that could be interpreted, including an impressive exposed coal seam	Moderate
Technological value	The mining techniques used at Beggs Outcrop were not unique from other small West Coast mining areas at the time	Limited
Symbolic / Commemorative values	No known values	n/a
Early period of the district's settlement	The site is not associated with early coal mining activity on the Denniston Plateau	Nil
Rarity	Remnants of 20th century underground coal mines are known to exist at the Whareatea, Sullivan, Sullivan West (Watson and Wright 2004), Rewanui, Fly Creek (Stockton) and Charming Creek mines, and there are likely to be more remains at other mines. As such, the Beggs Outcrop cannot be said to be rare	Limited
Historical and cultural landscape.	The site is part of the wider historical coal mining landscape throughout the Buller region and specifically the nationally significant industrial heritage landscape of the Denniston Plateau. However, it does not contribute significantly to that landscape	Moderate

Cooks Lease Area Mine (L29/102)

The Cooks Lease Area Mine is an example of a small private mid-20th century coal mine of short duration.

An assessment of the historic heritage value of the Cooks Lese Area Mine (L29/102) based on the RPS is provided below in

Table 6 as this site has not been previously assessed. Overall, this site has limited value and significance, with the site deriving its greatest importance from the wider historic context/historic landscape of the Denniston Plateau.

Table 6. Assessment of the historic heritage significance of site Cooks Lease Area (L29/102) Mine based on the criteria in the WCRC RPS

Criterion	Comment	Significance Evaluation
Historic values	Cooks Lease Area is an example of a small private mid-20th century coal mine of short duration. This site reflects representative 20th century aspects of the local and regional history and is part of the story of coal mining on the Denniston Plateau.	Limited
Importance of the place to Poutini Ngāi Tahu	No known importance	n/a
Community Associations	Within the West Coast and Denniston community there is a strong association with the coal mining industry. Coal mining is still a major industry on the West Coast and mines like Cooks Lease Area would have a social significance for local communities. Possibly those who worked at the site or their relatives, are likely to have associations with the place.	Limited
Public education potential	This site has little public education potential with few visible remains	Limited
Technological value	The open cast mining techniques used at Cooks Lease Area were not unique from other small West Coast mining areas at the time	Limited
Symbolic / Commemorative values	No known values	n/a
Early period of the district's settlement	The site is not associated with early coal mining activity on the Denniston Plateau	Nil
Rarity	Cooks Lease Area is one of many small private coal mines that operated on the West Coast during the 20th century. Therefore, this site is not rare and, with very few remains, it is not a good representative example	Limited
Historical and cultural landscape.	The site is part of the wider historical coal mining landscape throughout the Buller region and specifically the nationally significant industrial heritage landscape of the Denniston Plateau. However, it does not contribute significantly to that landscape	Limited - Moderate

Power Poles

The heritage significance of the power poles associated with this power line has been assessed previously (Watson Aug 2010) as being limited, and most of their value is contextual, derived from their association with the surrounding landscape and mining along Cedar Creek Road from the 1950s to 1970s.

ASSESSMENT OF HISTORIC HERITAGE EFFECTS AND MITIGATION

The nature and significance of the historic heritage places within the UWHR Project sub-area have been assessed above. The potential impact of the proposal on the identified places is now considered, particularly in relation to direct physical impacts as well as setting and context.

The wealth of knowledge of the coal mining remains on the Denniston Plateau because of extensive previous historic research, archaeological survey and assessment has allowed the BPCP to undertake an extended options assessment to purposely avoid historic heritage sites where possible within the UWHR footprint.

The likely adverse effects on historic heritage because of the UWHR Project sub-area of the BPCP and associated infrastructure, and recommended mitigation measures, are outlined below in Table 7.

It is recommended that prior to the commencement of activities associated with disturbing identified archaeological and other historic heritage sites within the UWHR Project sub-area, that Bathurst commission the development of a Historic Heritage Management Plan (HHMP) with stakeholders for the Project sub-areas¹⁰ to:

- Document and describe the strategy, objectives and actions that Bathurst propose to mitigate adverse effects on historic heritage during the pre-mining, mining and post-mining phases of each of the Project sub-areas;
- Document and describe the strategy, objectives and actions that Bathurst propose to provide additional historic heritage compensation measures to address any shortfall in specific mitigation measures for adverse effects on historic heritage within the Project sub-areas;
- Demonstrate compliance with the conditions on the Project sub-areas in statutory approvals.

For practical implementation the HHMP will incorporate any Archaeological Management Plan (AMP) covered by an Archaeological Authority under the FTAA.

¹⁰ For example, a HHMP had been developed and completed previously for the separate Bathurst Escarpment project.

Table 7. Summary of adverse effects of the UWHR on historic heritage, proposed mitigation and overall effects after mitigation

Site / Heritage Feature(s)	Nature of adverse effects	Proposed Specific Mitigation Measures	Objective(s) of mitigation and link to effects (loss mitigating)	Additional initiatives recommended to address any shortfall in mitigation	Overall Effects (after mitigation)
<u>Iron Bridge Mine</u> (L29/98)	A remnant of a possible collapsed rope road/flume already impacted on by road construction will be destroyed. A non in-situ return airway concrete pillar/foundation will be moved away from the UWHR alignment and possible associated sub-surface archaeological deposits will be destroyed. In places underground workings are known to be very shallow so may need to be purposefully collapsed, to avoid subsidence when the road is excavated and constructed.	As a precaution an Archaeological Authority is being applied for under the Fast-track Approvals Act process to cover the Iron Bridge Mining area. Archaeological monitoring, recording and investigation of any archaeological features associated with the mine that are affected within the Project area under a developed Archaeological Management Plan approved under the Authority. Move the return airway concrete pillar/foundation and associated timbers and metal rods to the south of/above the proposed construction footprint. During the construction of the UWHR the ability to access and view exposed underground workings is limited due to safety considerations. Notwithstanding this, where there will be opportunities for Bathurst staff/Contractors during construction to record and photograph exposed workings and features of interest and	Recovery of historical information Protection of remaining heritage features	n/a	Minor Adverse Effects

Site / Heritage Feature(s)	Nature of adverse effects	Proposed Specific Mitigation Measures	Objective(s) of mitigation and link to effects (loss mitigating)	Additional initiatives recommended to address any shortfall in mitigation	Overall Effects (after mitigation)
		retrieve items that might be useful for displays and interpretation by the methods outlined in the HHMP. Artefact recording, collection and deposit if discovered			
<u>Beggs Outcrop</u> (L29/99)	Construction of the UWHR on the southern side of Cedar Creek Road at Beggs Outcrop will destroy any subsurface remains of 1950s – early 1960s mining features.	In accordance with a HHMP: Avoidance and protection of adjacent surface mining remains on the northern side of the UWHR at Beggs Outcrop (i.e. location recorded on disturbance [construction/mine] plans and within ‘no-work’ exclusion zones (GPS fencing in machines); place barriers/ fences around features in proximity to prevent inadvertent damage). Archaeological monitoring of earthworks along the southern side of the UWHR at Beggs Outcrop to record any subsurface remains of 1950s – early 1960s mining features. Artefact recording, collection and deposit if discovered	Protection of remaining surface mining features Recovery of historical information	n/a	Nil to Minor Adverse Effects
<u>Cooks Lease Area</u>	Removal of 1950s coal rubble / spoil heaps, coal outcrops and discarded metal remains	In accordance with a HHMP:	Recovery of historical information	n/a	Nil to Minor Adverse Effects

Site / Heritage Feature(s)	Nature of adverse effects	Proposed Specific Mitigation Measures	Objective(s) of mitigation and link to effects (loss mitigating)	Additional initiatives recommended to address any shortfall in mitigation	Overall Effects (after mitigation)
(L29/102)		Artefact recording, collection and deposit if discovered			
<u>Power Poles</u>	Removal of a number of individual power poles Power poles on the very edge of the road may be damaged in the future, particularly during road maintenance.	In accordance with a HHMP: Avoid individual power poles in proximity to the UWHR if possible. Recording the entire power line and establishing the source and destination of the power supply. To minimise the possibility of damage during future road maintenance, those undertaking works should be instructed not to disturb remaining power poles.	Protection / retention of remaining power poles Recovery of historical information	n/a	Nil to Minor Adverse Effects
Effects on the historic setting of key historic heritage places or heritage landscapes	The incremental loss of parts of the significant Denniston Plateau historic landscape by modern mining infrastructure, which is largely absent from the Denniston Plateau, will lead to an overall negative effect on the historic values on the Plateau and its historic setting. Public access and education opportunities to this part of the Denniston heritage landscape	Avoidance and protection of adjacent surface mining remains (i.e. location recorded on disturbance [construction/mine] plans and within 'no-work' exclusion zones (GPS fencing in machines); place barriers/fences around features in proximity to prevent inadvertent damage). Commission an engineering assessment of the structural integrity of the brick reclining chimney of the Kiwi Fan House and Compressor	Protection and conservation of remaining heritage features		Moderate Adverse Effects

Site / Heritage Feature(s)	Nature of adverse effects	Proposed Specific Mitigation Measures	Objective(s) of mitigation and link to effects (loss mitigating)	Additional initiatives recommended to address any shortfall in mitigation	Overall Effects (after mitigation)
	will be restricted during construction and mining operations.	(L29/101) and options to stabilise if required. Where public access currently exists through to the Mackley Track, separated pedestrian/ cycle access will be provided for. On closure and rehabilitation of the mining operation to reestablish public access to this part of the Denniston heritage landscape.			

UWHR General Mitigation of Heritage Effects

It is recommended that the following historic heritage mitigation measures are adopted and implemented by a HHMP¹¹ for the UWHR Project sub-area:

- Since the proposal may impact on archaeological remains associated with the Iron Bridge Mine (L29/98), an Archaeological Authority is being applied for under the Fast-track Approvals Act process prior to the start of any works that could impact on pre-1900 subsurface remains. An Archaeological Management Plan (AMP) will be submitted with the Authority application that will provide procedures to be followed during archaeological investigation, recording and monitoring of earthworks and procedures for recording any pre-1900 archaeological evidence before it is modified or destroyed.
- It is also considered possible that unrecorded subsurface archaeological sites may be exposed and impacted on along other areas of the UWHR – Southwestern section, given the proximity of the late 19th century mining and settlement remains within the Heritage NZ Listed and TTPP scheduled – Denniston Historic Area. Therefore, it is recommended that the Authority under the Fast-track Approvals Act also covers this area so that potential delays can be avoided should sites be exposed.
- Archaeological monitoring, investigation and recording of any archaeological remains affected and subsequently uncovered during earthworks for the proposed mining operations will be carried out.
- Protection measures should be put in place so that additional heritage mining remains/features associated with the Iron Bridge Mine (L29/98), Kiwi Mine (L29/101) and Beggs Outcrop (L29/99) (including power poles) are not inadvertently impacted upon. For example, their locations should be marked on development plans and within ‘no-work’ exclusion zones (GPS fencing in machines), and temporary fencing installed around the sites in the vicinity of construction works.
- Commission an engineering assessment of the structural integrity of the brick reclining chimney of the Kiwi Fan House and Compressor (L29/101) and options to stabilise if required.
- Recording of any 20th century historic remains affected and uncovered during earthworks.
- New recording and research results should be disseminated to Heritage New Zealand, DOC and Buller District Council (Cultural Heritage Inventory), as well as the public and deposited with local archives/heritage groups and organisations (e.g. Denniston Heritage Trust (DHT)).

Overall Effects of the UWHR

The wealth of knowledge of the coal mining remains on the Denniston Plateau because of extensive previous historic research, archaeological survey and assessment has allowed the BPCP to undertake an extended options assessment to avoid historic heritage sites where

¹¹ Except where an Archaeological Management Plan is in place under an Archaeological Authority.

possible within the UWHR footprint. The UWHR has been designed to avoid impacting on all the heritage features and archaeological sites within the Heritage NZ Listed Area and TTPP scheduled – Denniston Historic Area, including the extensive and significant early settlement and coal mining remains at Burnetts Face and Coalbrookdale and the main surface remains of the Iron Bridge Mine (L29/98) and Kiwi Mine.

Those few heritage features which are impacted can be effectively mitigated through recording and the dissemination of research results.

Overall, the effects of the proposed UWHR on historic heritage after recommended mitigation are likely to be minor, while the effects remain moderate on the historic setting of key heritage places or heritage landscapes due to the expansion of modern mining infrastructure.

Conclusions

- The UWHR Project sub-area will cross within the very southern extent of the Heritage NZ Listed Area – Denniston Historic Area, a Category I historic place (NZ Heritage List No. 7049). Therefore, Heritage NZ is an affected party in relation to any consent application affecting this item on the List. However, the proposed alignment has been designed to avoid impacting on all archaeological and other historic heritage sites or features within this area, including the extensive and significant early settlement and coal mining remains at Burnett’s Face and Coalbrookdale, and the surface remains of the Iron Bridge Mine (L29/98) and Kiwi Mine (L29/101).
- The proposed alignment of the UWHR does cross the very southern extent of the Te Tai o Poutini Plan (TTPP) Heritage Schedule – Denniston Historic Area (HH5 and ARCH5); therefore, resource consent is required to impact on this area.
- The proposed UWHR crosses an area of extensive underground mine workings associated with the Iron Bridge Mine (L29/98). The workings of Iron Bridge Mine south of the Waimangaroa River to the haul road date from 1887- 1945. While the UWHR across this area is primarily located within an already modified road corridor in places the Iron Bridge Mine underground workings are known to be very shallow so these may need to be purposefully collapsed, to avoid subsidence when the road is excavated and constructed.
- The proposed UWHR – Eastern section will impact on remains of a Return Airway (concrete pillar) that are not in situ, and these remains could be moved south and uphill out of the construction corridor. However, there may be other in-situ subsurface archaeological deposits in this area that were associated with the Return Airway site.
- Part of a possible rope road/flume alignment may be impacted upon where it intersects with the existing road alignment, but this is an unconfirmed feature and consists of a track cutting. Some discarded metal remains of unknown origin will also be impacted but these remains could be moved north outside the construction corridor.
- As a precaution an archaeological Authority under the Fast-track Approvals Act 2024 will be applied for to cover the Iron Bridge Mining area (L29/98) and other

areas of the UWHR – Southwestern section in close proximity of the late 19th century mining remains within the Heritage NZ Listed and TTPP scheduled – Denniston Historic Area. Archaeological monitoring, recording and investigation of any archaeological features associated with this site that are affected within the Project area will be carried out under a developed Archaeological Management Plan.

- During the construction and operation of UWHR the ability to access and enter historic underground workings is limited due to safety considerations. Notwithstanding this, there may be opportunities for Bathurst staff to photograph workings of interest (where structural remains, graffiti, etc are present) and retrieve items from the historic workings that might be useful for displays and interpretation.
- Construction of the UWHR on the southern side of Cedar Creek Road at Beggs Outcrop (L29/99) and the Cooks Lease Area (L29/102) will likely impact on subsurface remains of 1950s to early 1960s mining features. Most of the surface mining remains at Beggs Outcrop will be avoided.

Overall, the effects of the proposed UWHR on historic heritage after recommended mitigation are likely to be minor, while the effects remain moderate on the historic setting of key heritage places or heritage landscapes due to the expansion of modern mining infrastructure.

UWHR RECOMMENDATIONS

- The proposed alignment of the UWHR will cross within the very southern extent of the Heritage NZ Listed Area – Denniston Historic Area, a Category I historic place (NZ Heritage List No. 7049). Therefore, Heritage NZ is an affected party in relation to any consent application affecting this item on the List.
- The proposed alignment of the UWHR crosses the Te Tai o Poutini Plan (TTPP) Heritage Schedule One: Historic Heritage Items and Areas and Archaeological Sites – Denniston Historic Area (HH5) in two places; therefore, the Historic Heritage Rules of the TTPP will apply.
- Prior to the commencement of activities associated with disturbing identified archaeological and historic heritage sites within the UWHR Project sub-area, it is recommended that Bathurst commission the development of a Historic Heritage Management Plan (HHMP) for the Project sub-areas in order to:
 - Document and describe the strategy, objectives and actions that Bathurst propose to mitigate adverse effects on archaeological and historic heritage sites during the pre-mining, mining and post-mining phases of the Project sub-areas;
 - Document and describe the strategy, objectives and actions that Bathurst propose to provide additional historic heritage compensation measures to address any shortfall in specific mitigation measures for adverse effects on historic heritage within the Project sub-areas;
 - Demonstrate compliance with the conditions on the Project sub-areas in statutory approvals.
- As a precaution a general Archaeological Authority under the Fast-track Approvals Act 2024 process will be applied for to cover the UWHR – Southwestern section, and the Iron Bridge Mining area (L29/98) within the UWHR – Eastern section, prior to any works. The conditions should include archaeological monitoring, recording and investigation of any archaeological features and remains associated with this site that may be affected within the Project area, and any other archaeological remains uncovered during earthworks.
- Accidental discovery protocols should be included as a condition of resource consent, and an advice note reminding Bathurst of their obligations under the Heritage New Zealand Pouhere Taonga Act 2014 with regards to archaeology. These would apply to areas not covered by the Archaeological Authority.
- Protection measures should be put in place so that additional heritage mining remains/features associated with the Iron Bridge Mine (L29/98), Kiwi Mine (L29/101) and Beggs Outcrop (L29/99) (including power poles) are not inadvertently impacted upon. These should include having their locations marked on project plans and installing temporary barriers / fencing around the sites/features in the vicinity of construction works.

DENNISTON PEST FREE ENCLOSURES

Four long-lasting pest free enclosures are proposed on various parts of the Denniston and Stockton Plateaux as part of the BPCP Project. Of the four proposed enclosure fences two are located on the Denniston Plateau – North Denniston and Coalbrookdale, and two on the Stockton Plateau – Mt Augustus and Whirlwind Rise (see **Error! Reference source not found.** and Figure 30).

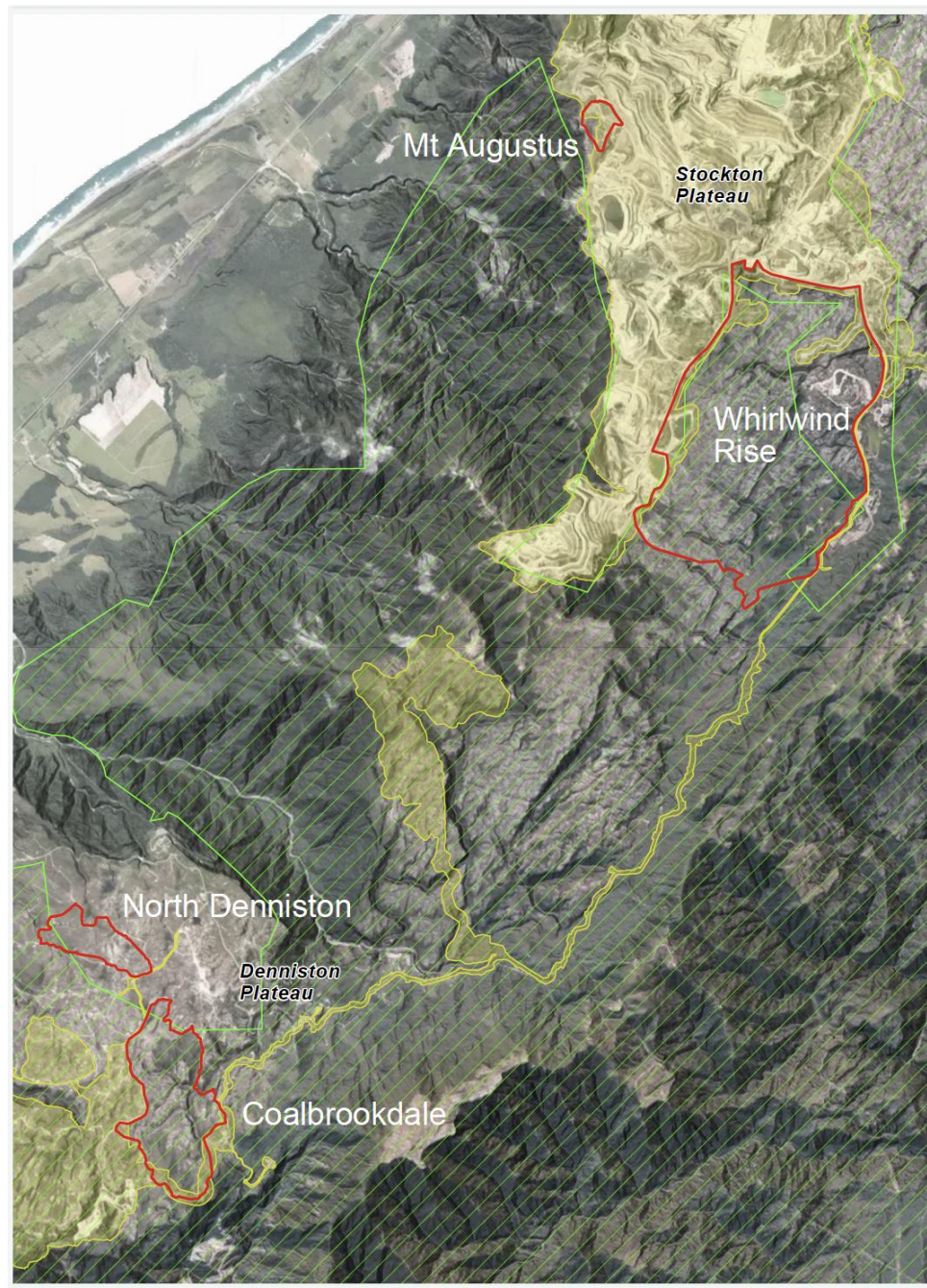


Figure 30. Location of the proposed pest free enclosures (red outlines) on the Stockton and Denniston Plateaux (source: Alliance Ecology)

The same fence design is proposed for all four sites. The posts are treated radiata pine, with a minimum small end diameter of 150mm. They provide outstanding support when driven into drilled holes at 2m spacings. The fence has a 400mm wide mesh skirt, buried where substrates allow, or cemented and bolted directly to exposed sections of rock (Figure 31).

A variety of different culvert systems allow water to pass under the fence, with the size of the pipes, concrete wing-walls and screens dependent on predicted flows. The larger units incorporate hinged flap gates which open during floods then close afterwards.

Machinery access and construction of the fences is required. Post holes will be drilled due to the typical substrate of the wider plateaux with exposed rock slabs, rock cobbles and drifts of fine sediment.

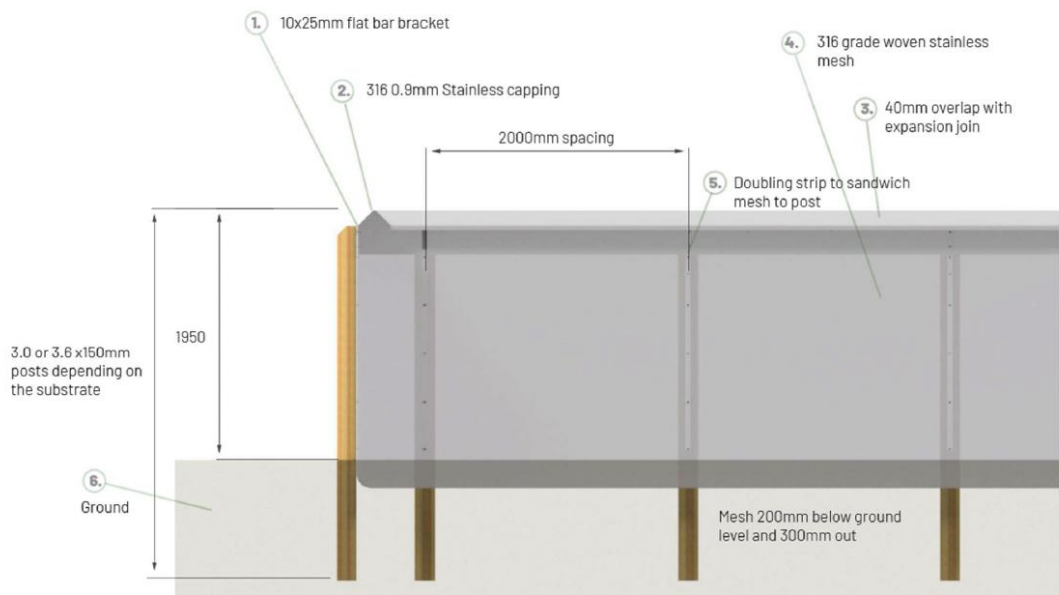


Figure 31. Standard design of Pestproof Fences Ltd stainless steel pest exclusion fence (source: Pestproof Fences Aug 2025: fig 3)

North Denniston

The proposed North Denniston fence site will enclose 47.2 ha to the south of Denniston Township and west of the Whareatea Road (Figure 30). Ninety percent of the fence will be constructed along existing roads and tracks with few inflow culverts and small outflow culverts (11 in total) (Figure 32 and Figure 33).

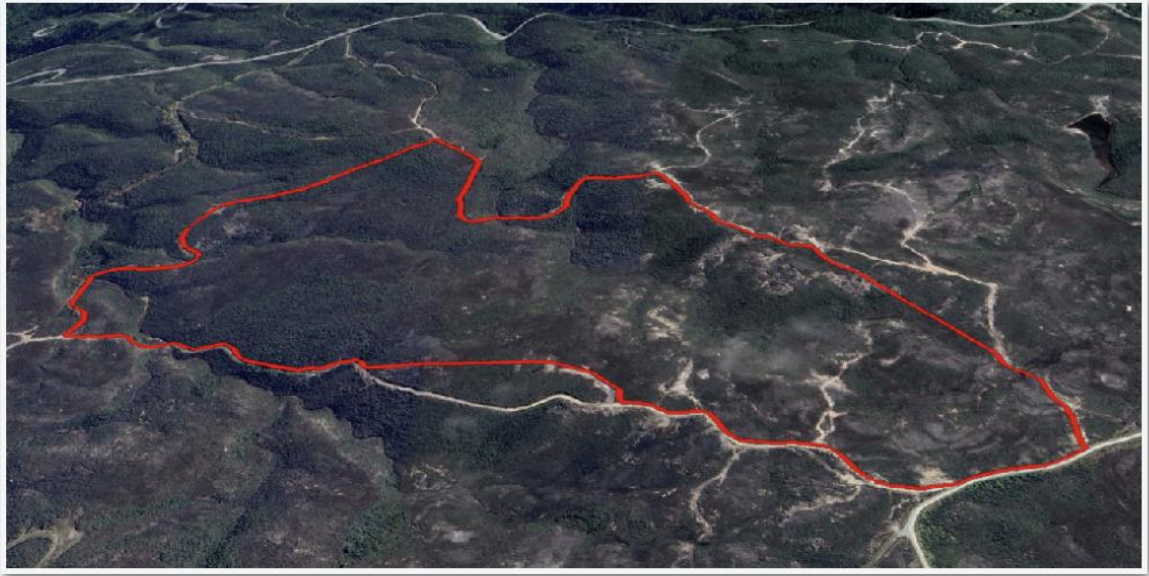


Figure 32. The proposed North Denniston fence site (source: Alliance Ecology)



Figure 33. Example of the building alignment of the proposed North Denniston fence along an existing road

Effects of the North Denniston fence

Remnants of the Monocable Aerial Cableway (K29/59) are located within proximity to the proposed North Denniston fence alignment in two places where the fence intercepts the previous cableway alignment (see Figure 34 and Table 8). Typically, these remnants (A26 – A30) consist of concrete tower foundations and associated metal remains.

Built in 1950-1953, this electrically powered monocable aerial system carried coal from the Whareatea, Sullivan and Escarpment mines to the Denniston Incline brakehead from 1954 until 1968. It was 2.29 miles (3.68km) long, comprising drive and loading stations at the Whareatea end, an intermediate loading station at the Sullivan mine bins, an angle station 1.29 miles (2.07km) from the incline brakehead, a terminal tower inside the brakehead bins and 38 support towers.¹²

Most of the cableway towers were removed for scrap when the aerial cableway was replaced by road transport in 1968; however, there were still 14 standing cableway towers in 1982. Subsequently, most towers were taken down for steel to build supports for hydro pipes at the Whareatea Mine.

The main elements of the Monocable Aerial Cableway can be found today at Denniston township and Brakehead and near the Sullivan and Whareatea Mines sites. However, remnants are scattered along the 3.68km aerial route between the Denniston Brakehead and The Steps entrance to the Whareatea Mine. Between the drive station at Whareatea Mine and the Incline Brakehead at Denniston are concrete foundations and numerous metal remains including tower components, wheel assemblies and buckets. Thirty-five sets of concrete foundations have been recorded.

At both fence locations in proximity to the Monocable Aerial Cableway remnants the proposed fence will be constructed along already constructed roads and tracks and should not have any impact on these remains. As a precaution Features A26, A27 and A29 should be identified on the ground and temporarily fenced off prior to fence construction in these areas.

Table 8. Monocable Aerial Cableway features in proximity to the North Denniston fence (see Figure 34) (source: Watson and Wright May 2004:43-44)

Feature No.	NZTM East	NZTM North	Description
A26			Slabs, wheel set. 665m asl.
			ROAD
A27			Slabs, both wheel sets, intact ladder. 661m asl.
A28			Slabs, both wheel sets, ladder. 664m asl
			GULLY
A29			Two oblong slabs flush with the ground. Steel tower foundation, section of ladder with one side missing. Loaded wheel set, no wheels, nearby. Pipe with insulators a short distance north along aerial line. Three good buckets near power pylon at top of hill. 676m asl.

¹² For more detailed historical background to this site see the Appendix: BPCP Historical and Archaeological Background.

Feature No.	NZTM East	NZTM North	Description
A30			One small foundation slab, with possibly another underneath a base flange on the ground. Some tower angle gussets. Loaded wheel set, one wheel each end, complete unloaded wheel set. Two buckets. 660m asl.

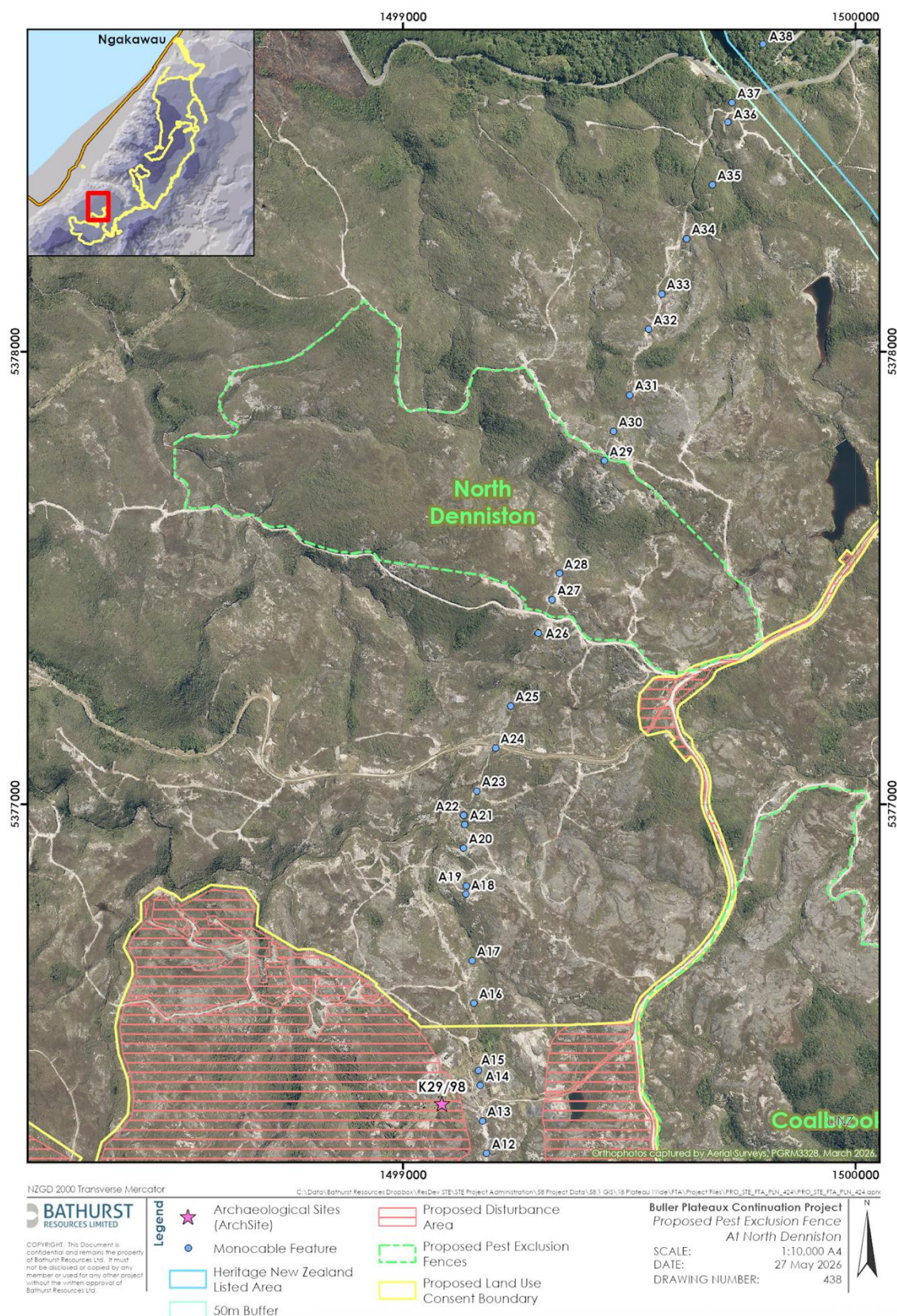


Figure 34. The location of recorded heritage features of the Monocable Aerial Cableway (K29/59) (A#) located within proximity to the proposed North Denniston North pest free enclosure fence

Denniston Coalbrookdale

The proposed Denniston Coalbrookdale fence site will enclose 154.30ha to the south of Denniston Township and east of the Whareatea Road (Figure 30). The fence will be constructed almost entirely on or alongside existing roads and tracks, some yet to be established as part of the UWHR (Figure 35). Some remedial earthworks will be required to upgrade some of the existing drill tracks, and numerous small inflow culverts will need to be installed along the Whareatea Road.

The site drains from west to east and includes the headwater tributaries of the Waimangaroa River (Burnetts Stream). The fence will cross the stream at the point of the indent, halfway along the eastern boundary. The fence alignment will need to leave the UWHR at this point and descend into the Waimangaroa River and climb back out of it. This will require significant bench cutting and a substantial culvert system to bridge the river itself.



Figure 35. The proposed Denniston Coalbrookdale fence site (source: Alliance Ecology)

Effects of the Denniston Coalbrookdale fence

From the ESE Project sub-area, the southwest section of the Denniston Coalbrookdale fence will follow the alignment of the proposed UWHR for approximately 1 km to link in with the existing Cascade Mine access road. This alignment has been selected through an extended options assessment to avoid the archaeological sites and other heritage features located within the Heritage NZ Listed Area and TTPP scheduled Historic Heritage Area – Denniston Historic Area.¹³

The southwestern section of the proposed UWHR and fence does cross the very southern extent of the Denniston Historic Area (Figure 36). However, within this area it will not impact any known archaeological and other historic heritage sites or features. The closest recorded heritage features within the southern extent of the Denniston Historic Area to the UWHR – southwest section are the Coalbrookdale Fan House (L29/86), the Fan House Dam (Feature 76) and Whareatea Dam (L29/49 – Feature 78), which will all be avoided (Figure 37).

Further north, the proposed Denniston Coalbrookdale fence alignment then leaves the UWHR and follows an existing 4WD road down the eastern side of the Burnetts Stream valley to cross the stream. On the opposite side of Burnetts Stream, the fence alignment climbs up out of the valley predominantly along an existing foot / mountain bike track. Again, this section of the fence alignment crosses through the Denniston Historic Area, where there are a number of archaeological and other historic heritage sites or features recorded in the lower reaches of the Coalbrookdale Valley, which are associated with the Coalbrookdale Mine (1884 -) and ‘Village of Coalbrookdale’ (1891-1956) (see Figure 36 and Figure 38; Table 9).

The fence alignment of the Denniston Coalbrookdale fence in this area was chosen along a predominantly modified route requiring little or no vegetation clearance to reduce the ecological harm that would result from construction along an alternative route on the western side of Burnetts Stream and the Denniston Historic Area.

The proposed fence alignment does avoid known recorded archaeological features located within the Denniston Historic Area and will be constructed on already modified areas. The rope road formation between Burnett’s Face and Coalbrookdale Sheets (sheds) that runs along the Coalbrookdale Valley floor (L29/24) on the eastern side of Burnetts Stream passes through a tunnel under the 4WD road at this location. As a precaution sites L29/32, L29/34 and L29/35 (historic house terraces) located in proximity should be identified on the ground and temporarily fenced off prior to the pest free enclosure fence construction in these areas (Figure 38).

While the proposed fence alignment does avoid known recorded archaeological features within already modified areas, the required significant bench cutting and a substantial culvert system to bridge the river may impact on previously unrecorded subsurface archaeological remains. The fence alignment will also create a physical and visual barrier through the Denniston Historic Area and the Coalbrookdale Walk, which affects the amenity value of this place. However, a gate will be provided in the fence at this location to allow access along the length of the Coalbrookdale Walk.

¹³ For detail on the Heritage NZ Listed Area – Denniston Historic Area, see the accompanying Appendix report: BPCP: Historical and Archaeological Background.

Table 9. Recorded archaeological sites located in proximity to the Denniston Coalbrookdale fence

NZAA Site No.	Heritage NZ List	Grid Reference (NZTM)	Feature No. (Wright 2001)	Name / Description
L29/24	Denniston Historic Area	██████ ██████	61, 70, 65	The rope road formation between Burnett's Face and Coalbrookdale Sheets (sheds)
L29/32	Denniston Historic Area	██████ ██████		Historic – domestic. Geordie Settlement. Three terraces with building remnants (chimney, piles, stone wall)
L29/34	Denniston Historic Area	██████ ██████		Historic – domestic. Three small house terraces. There were other houses/huts on south side of creek but destroyed by road works. Upper limit of Coalbrookdale Village.
L29/35	Denniston Historic Area	██████ ██████		Historic – domestic. Small terrace on toe of hill immediately above road– reportedly location of the last standing house at Coalbrookdale

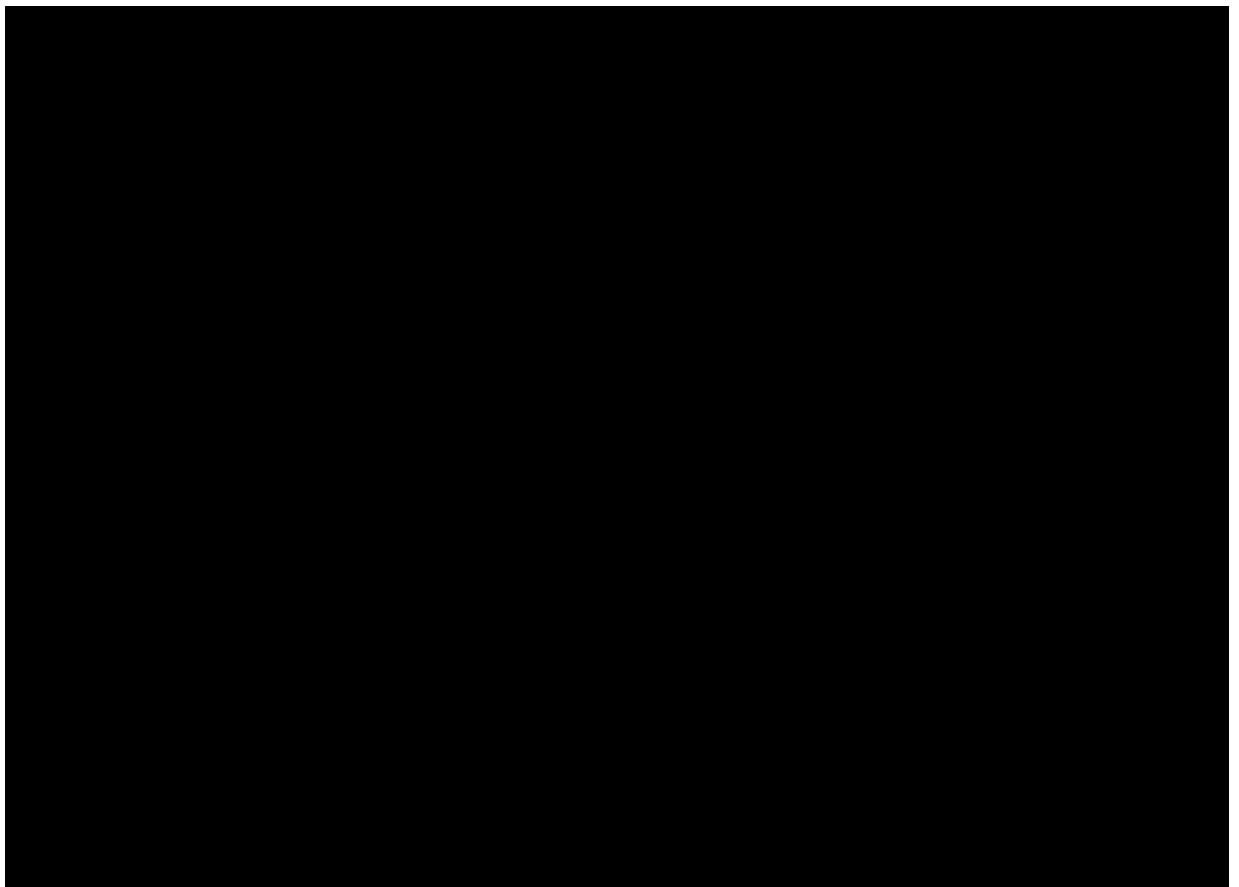


Figure 37. The location of the Coalbrookdale Fan House (L29/86 – blue circle), the Fan House Dam (Feature 76 – top yellow circle) and Whareatea Dam (L29/49 – bottom yellow circle) in proximity to the alignment of the UWHR (southwest section) and Denniston Coalbrookdale pest free enclosure fence (orange line)

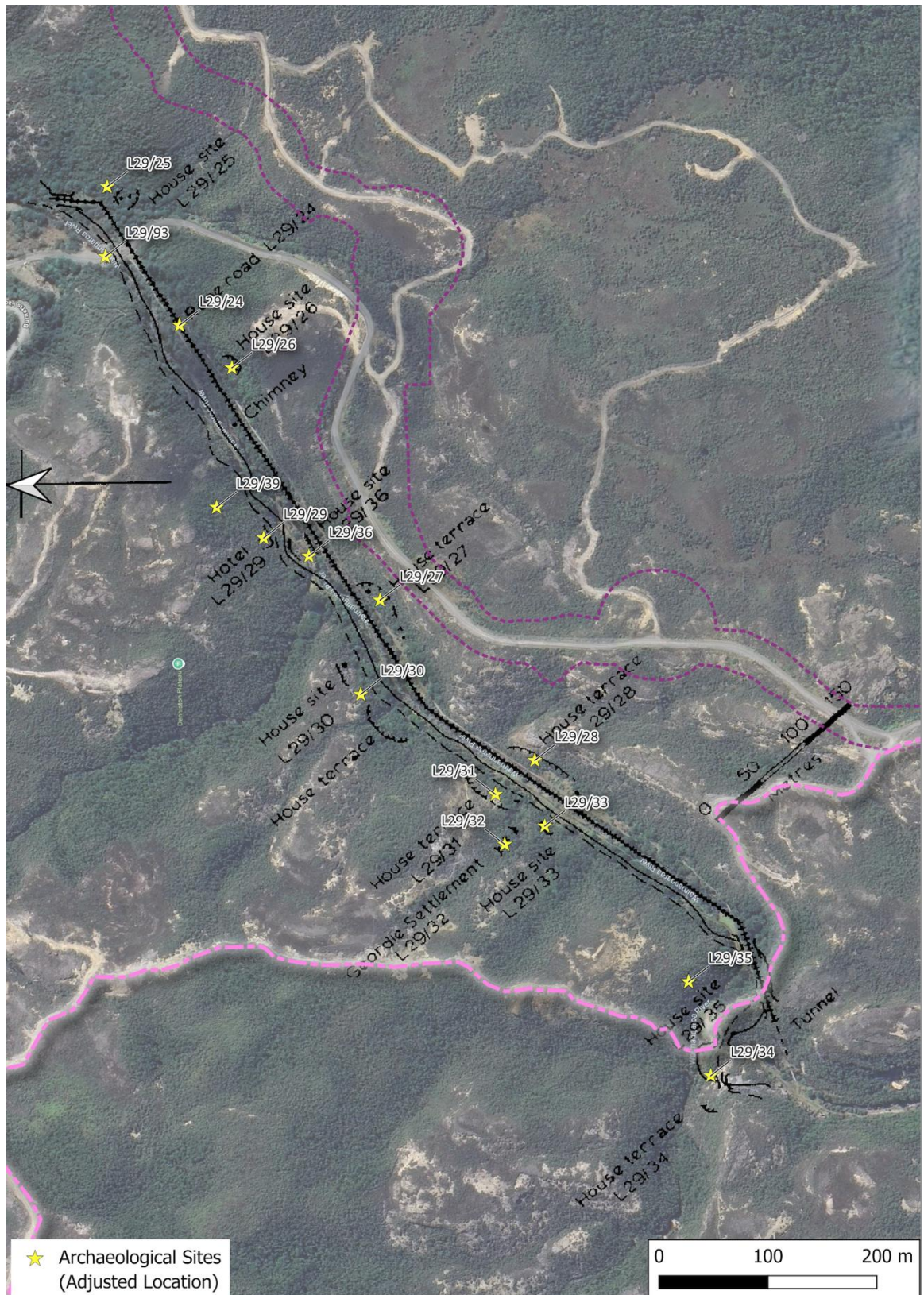


Figure 38. Aerial overlay of the Denniston Coalbrookdale fence (pink dashed line) through the Denniston Historic Area in proximity to recorded archaeological sites in the Coalbrookdale Valley, associated with the Coalbrookdale Mine (1884 -) and 'Village of Coalbrookdale' (1891-1956)

Conclusions

- Remnants of the Monocable Aerial Cableway (K29/59) are located within proximity to the proposed Denniston North fence alignment in two places where the fence intercepts the previous cableway alignment. Typically, these remnants (A26 – A30) consist of concrete tower foundations and associated metal remains.
- The proposed alignment of the Denniston Coalbrookdale fence will cross the Heritage NZ Listed Area – Denniston Historic Area and Te Tai o Poutini Plan (TTPP) Heritage Schedule One: Historic Heritage Items and Areas and Archaeological Sites – Denniston Historic Area (HH5), in two places. However, the proposed alignment has been designed to avoid impacting on all recorded archaeological sites within this area, which are associated with the Coalbrookdale Mine (1884 -) and ‘Village of Coalbrookdale’ (1891-1956).
- It is considered possible that unrecorded subsurface archaeological sites may be exposed and impacted on along areas of the UWHR – Southwestern section and Denniston Coalbrookdale pest free enclosure fence, given the close proximity of the late 19th century mining remains within the Denniston Historic Area. As a precaution a general Archaeological Authority under the Fast-track Approvals Act 2024 process will be applied for to cover these areas. The conditions should include archaeological monitoring, recording and investigation of any archaeological features and remains associated with this site that may be affected within the Project area, and any other archaeological remains uncovered during earthworks.

DENNISTON PEST FREE ENCLOSURE FENCES RECOMMENDATIONS

- The Denniston Coalbrookdale pest free enclosure fence will cross within the very southern extent of the Heritage NZ Listed Area – Denniston Historic Area, a Category I historic place (NZ Heritage List No. 7049). Therefore, Heritage NZ is an affected party in relation to any consent application affecting this item on the List.
- The proposed alignment of the Denniston Coalbrookdale pest free enclosure fence crosses the Te Tai o Poutini Plan (TTPP) Heritage Schedule One: Historic Heritage Items and Areas and Archaeological Sites – Denniston Historic Area (HH5) in two places; therefore, the Historic Heritage Rules of the TTPP will apply.
- As a precaution a general Archaeological Authority under the Fast-track Approvals Act 2024 process will be applied for to cover the UWHR – Southwestern section and eastern extent of the Denniston Coalbrookdale pest free enclosure fence prior to any works. The conditions should include archaeological monitoring, recording and investigation of any archaeological features and remains associated with this site that may be affected within the Project area, and any other archaeological remains uncovered during earthworks.
- Recorded archaeological sites L29/32, L29/34 and L29/35 within the Denniston Historic Area should be identified on the ground by a qualified archaeologist and temporarily fenced off prior to fence construction of the Denniston Coalbrookdale pest free enclosure fence to prevent being impacted upon.
- Features A26, A27 and A29 of the Monocable Aerial Cableway (K29/59) should be identified on the ground and temporarily fenced off prior to fence construction of the Denniston North pest free enclosure fence in these areas to prevent being impacted upon.
- If unidentified archaeological sites or heritage features be identified during the fence build, a modified route should be selected with archaeological advice if possible to avoid these sites and/or features.

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NZAA ARCHSITE SITE RECORD FORMS

Refer to the accompanying Appendix report: BPCP Historical and Archaeological Background – Appendix 2.